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THE MILITARY SERVICE INSTITUTION
OF THE
UNITED STATES.

"I cannot help plead to my countrymen, at every opportunity, to cherish all that is manly and noble in the military profession, because Peace is enervating and no man is wise enough to foretell when soldiers may be in demand again."—GENERAL SHERMAN.

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ANNUAL REPORT OF THE EXECUTIVE COUNCIL.

TO THE MEMBERS OF THE INSTITUTION:

GENTLEMEN: In compliance with the requirements of Article VI of the Constitution, the Executive Council presents its report for the year 1902, as follows:

The question presumably first in interest to members of the Institution at successive general meetings is its state relative to usefulness.

The present condition in this respect appears to be satisfactory, as evidenced by increase in membership and in enlarged general interest taken in the proceedings of the Institution, particularly by the younger officers of the Army and by members of the National Guard, and of military organizations generally of the various States.

The additions to the original "Gold Medal Prize" of the annual prize known as the Seaman Prize of $100.00 in gold, due to the generous and patriotic spirit of Major Louis L. Seaman, U.S.V., (founded March 1, 1901), and of the "Hancock," "Buford," "Hunt" and "Fry" annual prizes (instituted March 14, 1902), for short papers on subjects relating to all branches of the military service, have had a stimulating effect in securing meritorious essays on subjects specified for these

prizes. The prizes taken in whole, now offered by the Institution, embrace a wide range of subjects, discussion based upon which must be of much benefit to the service, continuing as it will from year to year.

The matter next of general interest, that of finances, appears by the last report of the Treasurer to be in a satisfactory state. The balance on hand is $12,360.00. Included in this amount is the sum of $1,500.00, representing donations by citizens of New York for the general purposes of the Institution, of their respective shares in the "building fund," the distribution of which was recently decided upon.

The Institution has in prospect a permanent home at Governor's Island, as a result of the considerate and appreciative action of the Secretary of War, by provision as understood of suitable rooms to be allotted for use of the Institution in connection with the enlargement and improvement of that station.

Correspondence has been had, during the year passed, with purpose to effect the establishment of branches at certain places, as Chicago, San Francisco and Manila, deemed favorable thereof owing to the comparatively large number of officers stationed at such places, or in their immediate vicinity. Much interest was shown by those addressed in the general object proposed, and a spirit of co-operation indicated which it is believed will eventually have positive results. The general matter of the establishment of branches will be further considered by the Council.

Representation on the Executive Council has been extended to include the Navy, Marine Corps and the National Guard, which it is thought will result in the presentation of views and propositions, by the representatives of those bodies, that will aid the Council to intelligent action on matters of common interest having reference, especially, to the conduct of the JOURNAL.

The JOURNAL must be, in the nature of the case, the principal means for effecting results which are the essential motive for

the existence of the Institution; the numbers of members who may attend its meetings will necessarily be small, but there is practically no limit to the number who may read the JOURNAL, and profitably. Following the view here suggested as to the essential value of the JOURNAL, the question has been somewhat considered whether a *monthly* in place of a bi-monthly issue would not be advisable, as tending to more general and greater individual interest in the JOURNAL. Further consideration of the question will be given by the Council. In this connection it may be properly stated that the marked increase in membership during the past two years is due in considerable part to able and faithful editorship of THE JOURNAL.

THOS. H. RUGER,
President, Military Service Institution.

GOVERNOR'S ISLAND,
January 14, 1903.

Gold Medal Prize Essay, 1902.

THE ORGANIZATION AND FUNCTIONS OF A BUREAU OF MILITARY INTELLIGENCE.

By First Lieutenant EDWIN R. STUART, U. S. Army,
Corps of Engineers.

THE DUTIES AND ORGANIZATION IN PEACE.

THE proper organization of the Bureau of Military Intelligence is dependent upon the functions which it must perform, and it is necessary to determine the amount and character of the information to be obtained and deduce therefrom the proper organization.

The Functions of a Bureau of Military Intelligence. If the development of the existing military systems of Europe be studied, it will be seen that there the stage has been gradually approached where each nation, in order to preserve its national integrity, has been forced to adopt such a military system that it will be prepared to exert with the least possible delay the offensive or defensive strength of practically the entire male population capable of bearing arms.

The proper training, mobilization, concentration, and subsequent direction of the armies that will thus be called into the field at the opening of war involves such a vast amount of labor that it can be done promptly only if every possible contingency of war has been foreseen and, as far as possible, provided for. The result has been the adoption by each nation, in a form suited to its particular need, of the General Staff system. This General Staff has a central organization, consisting of the ablest officers, whose duty it is to formulate the plans for, and to fix, as far as possible, the details of, the employment of the military forces in war, and to point out the means whereby the military resources of the nation may be most fully and promptly developed.

The specific duties of the Central General Staffs of the various European armies include (Staffs of the Various Armies, Military Information Division No. 22, 1899) "devising the

best system of defense of the country, and originating in time of peace measures for the prompt mobilization and efficiency, as well as anticipated movements of the army in case of an outbreak of war" (Austria Hungary); "preparation in time of peace of all military operations" (France); "directing all studies relating to preparedness for war" (Italy); "collecting and arranging military information necessary to a knowledge of German and foreign defenses—study of the use of the army in case of war—transport and concentration of troops on the theatre of war" (Germany); "preparation in time of peace and execution in time of war of all military operations" (Russia).

The Austro-Prussian War in 1866, and the Franco-German War of 1870–71, show that the result of a war will be largely influenced if not wholly controlled by the perfection of the machinery which works out the preparation and means of using the military forces.

In our own war with Spain, it was not until the end of August that the mobilized forces of the United States aggregated 275,000, though most of this force has been authorized April 23, and the remainder on May 25, 1898, and only the reawakening of the policy of naval development and sea-coast fortification which had taken place some years before enabled us to successfully prosecute the war with even such an inferior power as Spain. The difficulty and delay attending the mobilization of the forces at that time was undoubtedly partly due to inexperience, but more largely to the faulty organization of the machinery for rendering our military forces available. The awakening of national spirit, together with the acquisition of out-lying possessions, put us in a position where foreign complications are much more probable than at the time when our present staff organization was deemed sufficient to our needs. We therefore stand to-day in the list of nations classed as world powers, and must accept the attendant responsibilities. This means that we are now in a position where we must, like all other world powers, be prepared to exert our military strength, subject however to conditions not found in any other of the world powers unless Japan be classed as such, and even in her case the parallel is not complete.

The necessity for a proper organization of our staff system is therefore upon us, and there is now before Congress for its

action, a bill for the creation of a General Staff Corps, the only provision of which having bearing upon the subject of this discussion being:

"Section 2. That the duties of the General Staff Corps shall be to prepare plans for the national defense, and for the mobilization of the military forces in time of war; to investigate and report upon all questions affecting the efficiency of the Army, and its state of preparation for military operations; to render professional aid and assistance to the Secretary of War and to General Officers and other commanders, and to act as their agents in informing and coördinating the action of all the different officers engaged in carrying out their orders; and to perform such other duties as may be from time to time prescribed by the President."

It will thus be seen that we are nearing the time when we will possess a General Staff Corps, which, in common with the corresponding organization of other armies, will be charged with the duty of preparing plans for defense, and for the mobilization and efficiency of the army. Preparation for defense necessarily includes the plans for the utilization of the armed forces in offensive as well as defensive operations against all possible antagonists.

The execution of this duty requires the possession of accurate information in a form readily available for use, concerning foreign military organizations and resources, as well as such information as is necessary in regard to our own territory.

The disastrous results arising from taking the field in active operations without an adequate force, or without an adequate idea of the character and strength of the force of the enemy to be encountered, is made clear by historical references. Taking the field without an adequate force may result from one of two causes:

1st. *From an Underestimate of the Strength of the Enemy.* In the Russo-Turkish War of 1877–78, the Russian army took the field, and for a time operations progressed favorably. At the end of a month, however, the advance was brought to a standstill by the defeat of that portion of the army told off to clear the Turks from the position of Plevna, on the flank of the adopted line of operations. No sufficient force could be concentrated to accomplish this object at that time, and as a consequence the mobilized army in Turkey had to be maintained in the field while the assistance of Roumania was secured and additional Russian troops mobilized and brought forward to the scene of operations. The long and bloody siege

of Plevna was the price paid for the failure to be properly informed of the strength of the Turkish forces.

Our own experience in the Philippines also illustrates the point. There the force originally sent was entirely inadequate to the task assigned to it, and, furthermore, the period of enlistment was such that the force had to be replaced during the time of active operations. Only after a considerable time had elapsed was a force sufficient in strength and permanence sent to do the work required. The cost in lives and treasure of subduing the Philippines would have been much less if the magnitude of the undertaking had been fully appreciated from the start, and an adequate force sent to do the work.

2d. *From lack of preparation.* The Franco-German War may be cited as an illustration of this point. The French forces took the field at the opening of this war evidently without an adequate conception of the perfection of the German war machinery. The result was that when the forces met on the frontier, the French armies were not ready to meet their foes, and the defeat and confusion resulting from lack of adequate preparation is still being paid for by the French government.

The experiences of the British forces in South Africa illustrate the result to be expected from taking the field with an inadequate force, both from lack of preparation and from underestimating the strength of the enemy. At the opening of the war, notwithstanding the fact that it must have been evident for some time that hostilities were inevitable, the beginning of operations found the British force of 20,000 troops pitted against 30,000 or 35,000 Boers, and the result was that the British forces were soon invested by the Boers in widely separated places. These forces had to be relieved, and the conditions required that they be relieved as soon as possible. The force sent to do the work of relieving the invested places was wholly insufficient, and the defeats of the British forces on the Tugela, the Modder, and at Stormberg almost simultaneously brought the gloom of the Black Week and caused England to begin all over the work of relief that had been brought to a standstill because the force sent was still insufficient to do the work, the difficulty of which was not understood in England. Only when the British forces in South Africa numbered five times the strength of the original relief

expedition were the operations prosecuted to a successful conclusion.

One of the most important points, therefore, in preparation for possible war is to form a correct estimate of the military power and resources of our possible enemies. It then becomes necessary to organize a sufficient force to overcome that which the enemy can equip and maintain in the field.

A suitable organization for collecting and arranging the information upon which the estimate of the enemy's strength is based is therefore a prime essential to the controlling head of a perfect military system.

The General Staff must, therefore, have as one of its necessary subdivisions, a perfectly organized and equipped Bureau of Military Intelligence.

In theory, perfect preparation for war would involve plans for both offensive and defensive operations against each and every nation of the world. Under such a supposition, information would be necessary upon the following points:—

1. Foreign armies, their organization, methods of mobilization and concentration, equipment, training, peace distribution, and the development of military science in all foreign countries.
2. Complete topographical maps of all foreign countries; statistics as to population, wealth, railways, highways, waterways, and all other lines and means of transportation, commerce, manufactures, and in general all information bearing upon the size of the armies which each nation would be able to equip and transport to the theatre of operations, and the length of time which it would be able to stand the financial strain of war.
3. Our own army, its training, equipment, and the state of training, equipment, efficiency, and readiness for service of the National Guard and other auxiliary forces.
4. Complete and detailed topographical maps of our own territory, and especially of those parts of our territory which would naturally be the theatre of operations at the beginning of a defensive war; statistics as to population, manufactures, means of transportation, railroads, waterways, highways, etc., in the United States.

The possession of the information above specified would enable the General Staff to form the necessary plans for the prosecution of war against any power of the world under the hypothesis that the territory of either belligerent was to become the theatre of operations.

The proper function of the Bureau of Military Intelligence is to provide the General Staff with the information it needs, and it therefore becomes necessary to consider what nations are possible antagonists in war, and what territories are possible theatres of operations, for military information in regard

to possible antagonists, and topographical information concerning possible theatres of operations are alone essential, and the organization of the Bureau of Military Intelligence should be shaped accordingly.

If we examine the heads under which the information is classified above, it will be seen that it is essential that we be kept fully informed in regard to the organization, methods of mobilization and concentration, equipment and training of foreign armies, and the development of military science, not necessarily with a view to their adoption, but in order that we may keep pace with foreign development, and be able to put into the field armies equal in training and equipment to the foes that they must meet, and in order that the commanders of our forces may be fully informed as to the character of their opponents.

Under the second head, it requires but a moment's consideration to see that as far as the principal military nations of Europe are concerned, their territory can not be considered as a possible theatre of operations for our armies during the time that any war organization we might now adopt would suffice to our needs. No one can possibly regard the invasion of France, Germany, Russia, England or Italy as possible except in the remote future, unless as allies to a power upon whom we could rely to furnish us the information that we might lack. Invasion out of the question, the information as to national defenses, except as to noting the development, becomes of secondary interest, and would affect only the naval operations that we might undertake if strong enough on the sea. It will be seen that the effort to acquire information in regard to topography may be limited to securing copies of the best existing maps.

We need, however, only remember the Venezuelan incident of some years ago, or consider the present application of pressure by Germany, Italy and England in Venezuela, to see that American blood shed in conflict with a European power will be shed on American soil, and that the scene of conflict, if outside of the United States, will be either in Central or South America or in the Dominion of Canada. These, then, are the theatres of operations of whose topography we must be thoroughly informed.

Statistics as to populaton, railways, waterways, commerce, etc., are not of particular importance, but are easily obtained.

The essential information is in regard to the wealth, and the manufactures of a military nature, and especially the available ocean transportation—in other words, information concerning the ability of the first-class powers to equip, transport to, and maintain forces in the Central and South-American countries, while the problem of war with England is entirely different, and must be considered separately.

Information in regard to our own army and our own territory must be complete in all details.

From the above it will be seen that our Bureau of Military Intelligence must be able to furnish information on the following subjects:

1st. Foreign armies, their organization, methods of mobilization and concentration, equipment, training, and the development of military science abroad.

2d. As complete and detailed topographical information in regard to the Central and South-American countries, and of the Dominion of Canada as it is possible to obtain, and maps of such other countries as may be readily procured. Statistics of foreign countries as to wealth, population, means for transporting and supplying troops abroad, and manufactures of articles necessary to equip and supply troops.

3d. Our own army, National Guard, and other forces, their equipment, state of efficiency and readiness for active operations.

4th. Topographical information in regard to our own territory, especially of those parts which will naturally be the theatre of operations at the beginning of war. General statistics relating to population, means of transportation, etc., in the United States.

The duties of the Bureau of Military Intelligence will naturally fall under three heads, (*a*) Collecting information, (*b*) Filing and indexing information, and (*c*) Distributing information.

COLLECTING INFORMATION.

The work under this head falls under two divisions—Foreign and Home.

Division of Foreign Military Information. The subjects upon which information is regarded as necessary have been given above under 1 and 2. The information may be obtained

by military attachés, special agents, from officers travelling abroad, and from other miscellaneous sources.

The military attaché is an institution so well recognized that international courtesy requires that to each of the principal military nations one be sent. At the same time the publicity of his position, and proper courtesy to the nation to which he is accredited, shut him off from a great many sources of information, and relegate him to duties more of a social than of a military nature. Our national self-esteem, as well as any possible usefulness on his part, require that an officer selected for this duty should be a man whose military attainments should be such as to command the respect of those with whom he is thrown in contact officially.

There is, however, much to be learned from a careful perusal of the military periodicals as well as the daily press, and from a study of the budgets and legislative action taken for the support of the military system, and these sources of information are open to the military attaché. They should, therefore, subscribe for the principal military and other periodicals, study them and transmit to the bureau at home such information as may be derived from these sources. This, together with such information as may be obtained from private sources, by purchase or otherwise, will enable the military attaché to keep track of the changes in commands and organization, and the distribution and equipment of the armed forces. The annual maneuvers should be witnessed by him, and if possible by other officers specially sent abroad for the purpose. From the maneuvers may be judged the efficiency and equipment of the troops, and from them may also be learned the existing ideas as to the formation and correlation of the different arms in attack and defense. Any special development in the way of a revolutionizing change in the armament or equipment of troops will undoubtedly be brought to the attention of the military attaché, but his position will prohibit him from making any effort to obtain information of definite character in regard to it. Here then is the province of special agents. The military attaché is better able to select these agents and control their movements than any one else. He must, therefore, be given the funds, and subject to the approval of the Central Board (hereafter to be defined) to expend the money necessary to obtain this information, as well as to purchase the best maps available of the country

to which he is accredited. The military attaché will, therefore, be able to supply all the information under the first head.

Officers travelling abroad may have the opportunity to procure valuable information. Any officer requesting leave to travel abroad should be required in his application for leave to state the places he proposes to visit, and should his itinerary appear to the Central Board to warrant it, the officer applying for leave should be required to report to the Central Board before starting abroad, in order that he might be given instructions to obtain any information that the Board might specially desire. Upon his return from leave, the officer should be required to report to the Central Board for examination, and should his report prove satisfactory, his absence should either wholly or in part be regarded as an absence on duty, and a per diem compensation be granted which would return him approximately half of his necessary travelling expenses. This gratuity should in no case be granted where the desired information could be more economically obtained in another way, and no officer should be so specially commissioned oftener than once in three years. The practical working of this method of obtaining information will be again referred to, and more fully discussed in connection with another phase of the subject.

To obtain topographical information in regard to the countries of Central and South America does not appear so difficult, as the only limitation would seem to be that no such information has ever been compiled. Any entanglement with a foreign power in South America would almost necessarily arise from the interference of the United States in behalf of such South-American country, and in that case we should be acting as allies to the country in whose territory the operations would occur. These countries could, therefore, be depended upon to furnish us such information as they themselves possessed, and in the event of war, the inhabitants of the country could be relied upon to act as guides, and thus our forces would have all the advantage of operating in a friendly country.

In the case of the Dominion of Canada, while we would not receive any assistance from the British or Canadian governments in informing ourselves in regard to the topography, the proximity of the country, the free intercourse, the fact that the same language is spoken, renders it easy to acquire this topographical information by means of special agents. In the case

of contiguous territory, it is impossible to prevent a thorough reconnaissance of the probable theatre of operations, as is shown by the fact that at the time of the opening of the Franco-German War, both belligerents were thoroughly informed as to the topography between the frontier and the capital of the enemy's country, even though different languages were spoken. The employment of the special agents sent to acquire this information would be regulated by the proper department of the Bureau of Military Intelligence.

The collection of information in regard to wealth, population, means for transporting and supplying troops abroad, and the manufactures of articles for equipping and supplying troops is in part the duty of the consuls, and all should be assigned to them. The duty of selecting from the total amount of information accumulated by the consuls that portion which is of military value should, however, be performed by the Bureau of Military Intelligence. Copies of all the consular reports should, therefore, be furnished to the Bureau, and its organization must include the necessary commissioned and clerical force to sift and compile it.

Division of Home Military Information. Under the third head, information in regard to our own forces is obtained merely by requiring the necessary reports from the different organizations, backed up by reports of inspections sufficiently rigid to make the reports a satisfactory indication of the condition of the different commands.

No general military survey, such as has been made by nearly all the military nations of Europe, has ever been attempted in this country, nor has it seemed in the past necessary. Certainly the conditions of the present do not warrant attempting it for military purposes. A great deal of our territory has, however, been mapped with sufficient accuracy and in sufficient detail to give all the material necessary in regard to our own territory. It seems necessary, therefore, only to take such steps as will place in the hands of the Bureau of Military Intelligence the best maps of our territory that have been made. To do this, no better plan presents itself than to assign to an officer a certain definite territory, and make him responsible that the best maps of the territory are furnished to the Bureau. The machinery necessary to execute this scheme is already in existence. The United States is divided up into districts for engineering works, each of which is under the command

of an Engineer officer. These districts are of such limited size that the commanding officer could, without increase of his office force, and with comparatively small outlay, obtain copies of the very best maps of the territory covered by his district that are in existence. Furthermore, the Engineer officer in command of the district is an educated topographer, and this, together with his necessary familiarity with his district and his being in close touch with the civil engineering profession and the local authorities, makes him at once the one to whom it is easiest to obtain the maps, and the best judge of the accuracy and value of the maps from a military standpoint. Larger and more accurate maps of the territory in the vicinity of the sea-coast fortifications are necessary, and again the Engineer officer in charge of the construction, having skilled assistants available in time of slack work in his district, is the man who can more easily and economically than any one else have these maps made.

Certain extensive surveys have been made, such as the Coast and Geodetic Survey, the Geological Survey, the Survey west of the 100th meridian, the surveys of the northern and Mexican boundaries, and the maps resulting from these surveys are of course available.

The scheme here proposed for collecting topographical information concerning our own territory has the advantage of being wholly in the hands of persons connected with the military service, and there is thus less likelihood of the work becoming publicly known.

The topography of the Central and South-American countries seems to present the greatest difficulty on account of the fact that maps sufficiently accurate for military use are not in existence, and the difficulty of revising and correcting them. The inducements to officers travelling abroad should be made specially favorable to travel in these countries.

The remaining information in regard to the United States is furnished by the census, except as regards the special manufactures of articles of equipment and supply for the army, and the detailed information in regard to the troop transporting power of the railroads as affecting the power to concentrate the armed forces at particular points. The Ordnance inspecting officers are familiar with the more important factories of military supplies, and the purchasing officers of the Quartermaster and Commissary departments must necessarily be familiar with

the manufactures and depots of articles of supply, and their routine reports would usually give such information as would be necessary. If these departments were under the supervision of the Chief of the General Staff Corps, as is contemplated in proposed legislation, the Bureau of Military Intelligence could readily be supplied with the requisite information by special reports ordered by the chief of the General Staff.

As for the troop transporting power of railroads, this varies so much between the periods of the census that special arrangements for keeping this information up to date would be necessary. The Chief of the Bureau of Military Intelligence should be empowered to confer with the proper authorities of the principal railroads from time to time, and obtain from them estimates of the carrying capacities of the railroads under different conditions of stress covering concentration of the Army at different points.

In collecting information as outlined above, considerable expenditure would be involved. The military attachés should have clerical assistance. Each District Engineer would need a small allotment to carry out the task assigned to him, and the Bureau would need funds for the hire of clerical help, printing maps, reports and other matter, sending special agents abroad, and filing, indexing, and distributing the information obtained. A necessary part of the proper working of the Bureau of Military Intelligence is that it be given a sufficient allotment of money to carry out the important work assigned to it.

The Central Board of the Bureau of Military Intelligence has already been referred to, and the organization of the Bureau will here be touched upon so far as is necessary to explain what is meant by the Central Board.

In all the military nations where the General Staff system has become essential, the importance and character of the work assigned to the General Staff are such that the plan adopted for forming it has had in view the selection of the very best talent in the Army to constitute the General Staff. The permanent assignment of an officer to the coveted position is made only after a long process of the survival of the fittest, thus assuring the caliber of the officers so assigned. Such a plan is not contemplated in the formation of our General Staff Corps, but the proper working of the General Staff requires that only the ablest officers be assigned to it. It is

assumed, therefore, that even with the temporary detail feature of our General Staff Corps, it will compare favorably with the corresponding organizations abroad.

The Bureau of Military Intelligence, forming as it must an integral part of the General Staff Corps, may be assumed to comprise a personnel which is the pick of the army, and if it does not, the work of the General Staff, based on the poor work of an inefficient Bureau of Military Intelligence, would be a costly edifice built on an insecure foundation.

It is proposed that there shall be associated with the Chief of the Bureau of Military Intelligence two other officers either permanently detached for service with the Intelligence staff, or possibly officers having such other duties as will admit of their rendering service in the Intelligence Bureau when required. The Chief of the Bureau and the two officers associated with him on the Central Board should be selected with a view to their forming a board of military experts to systematize and control the work of the Bureau. It is proposed to make this Central Board a powerful instrument in the collection and distribution of information. The members of the Board must be, above all things else, military students of that breadth of mind which realizes the necessities, and appreciates the value, of each part of the military machine.

Special circumstances, such as the occurrence of war abroad, furnish opportunities for acquiring information of inestimable value. Thus in the recent past we have had the operations of the British forces in South Africa, and the operations of the allied forces against Pekin. Under such circumstances it is proposed to order abroad to follow these operations either a member of the Central Board or an officer selected by it, preferably the latter. Prior to his departure, the officer selected should report to the Central Board and receive his instructions, and be acquainted fully with the methods in use in our Army which it is desired to compare with those of foreign services. When the period of operations is over, the officer or officers accompanying the forces should be ordered to report to the Central Board for examination. This examination, conducted by such a Board as is proposed, would draw out all the information that had been accumulated in a far more satisfactory manner and in a completeness of detail that could not be secured by having a report submitted, since such a report would comprise only the matter that had

seemed important to the officer making it, and omitting points that become important in connection with information derived from other sources.

This Central Board should have the power to cause to appear before it for examination any officer who had had a special opportunity to observe any particular feature of military operations.

Take, for instance, the operations of the allied forces against Pekin. It seems reasonably certain that the examination of a number of officers to be selected by the Central Board would have resulted in acquiring more information in regard to the foreign services represented in the expedition than could be derived from the ordinary and special reports submitted.

This Central Board is also best situated to keep in touch with the proper railroad officials, and thus keep accurately informed as to the capacity of the railroads to transport troops and their supplies.

Another source of information is the commercial agent and traveller, who by his ordinary work becomes familiar with greater or smaller areas of territory, as to topography, means and routes of transportation, and supplying power. Climatic conditions might also be important, and they would also be known to him.

By proper examination of these men, considerable additions could be made to the geographical knowledge, especially of the South-American countries and the Dominion of Canada. The Bureau of Military Intelligence must have a topographical section, and the officer in charge of this section is the proper person to collect the information in this way. He should be empowered to seek such sources of information, and with the approval of the Central Board to suitably compensate those from whom desirable information can be obtained.

There will be necessarily an intimate connection between the State Department and the Bureau of Military Intelligence. The State Department is throroughly cognizant of the governmental policy, and necessarily will from time to time come into possession of information either of direct military value or indicating the necessity for increased activity on the part of the Bureau of Military Intelligence in acquiring information along certain lines. On the other hand, the Bureau of Military Intelligence could frequently give to the

State Department valuable information in regard to the military effect of a particular policy, or a particular train of circumstances. The medium of communication between the two would necessarily be the Chief of the General Staff.

The existence of a properly organized Bureau of Military Intelligence implies also a similar organization connected with the Naval Service. These two are working to a common end, and the best results require complete co-ordination of the work of both Bureaus.

The probable theatres of operations have already been pointed out, and future operations will probably be, as those in Cuba were, joint military and naval operations. The basis of success in such operations must be a complete understanding of the needs of both Services, and any information gained by either bureau should be at the service of the other. This could best be attained by a mutual understanding and the adoption of similar systems of indexing and filing information. Under these conditions, the complete records of each bureau could be made available for the use of the other with the minimum labor and loss of time. Furthermore, a correct plan of military operations could not be made without access to the records of the Bureau of Naval Intelligence, so that the bearing of naval needs and policy can be properly taken into account by the General Staff in forming its plans of operations; similar considerations should govern the Naval Staff, otherwise the labor of the Commander-in-Chief of the Army and Navy, in controlling and harmonizing the action of the two Services in offensive and defensive war, would be rendered extremely difficult.

The sources of information and the methods of obtaining it have now all been discussed. The mass of information thus gathered must be kept available for instant use.

FILING AND INDEXING INFORMATION.

The ordinary library furnishes an example of an amount of matter similar to the records of the Bureau of Military Intelligence which must be filed and indexed with a view to providing access to all the available matter bearing upon a given subject, and it is also necessary that in the system adopted for filing the records, any new publication received must readily find its way to the proper place on the files.

The system which is most satisfactory for library conditions, will also be best suited for filing and indexing the records of the Bureau of Military Intelligence.

Of all the systems that have been tried for library work, none seems more satisfactorily to meet the requirements than the Dewey system of classification and index, used in combination with a proper card reference system. Not only because of its interest in this connection, but because it offers the system best adapted to indexing and filing professional notes and papers, a brief outline of the system will be given.

The Dewey system of classification arranges all subjects of human knowledge primarily under ten general heads. Each head is then divided into ten secondary and related heads. By further decimal subdivision, the classification may be rendered sufficiently minute for any purpose. The subdivisions are permanently numbered, and all matter on the same subject naturally receives the same number, and falls together in the system of filing. An alphabetical list of subjects giving the corresponding numbers completes the system. If information is sought on any particular subject, the corresponding number will immediately give access to all information at hand bearing on the subject.

Manifestly, the system of filing adopted for the Bureau of Military Intelligence should arrange all information by countries since the demand for information in time of stress would have particular reference to a single country. Maps should be filed separate from the rest of the information in possession of the Bureau, and the topographical section thus naturally separates itself, and requires a special officer in charge of it, and a separate indexing and filing of records.

The system of indexing proposed lends itself readily to expansion, and when the records to which a definite number has been assigned become too voluminous for ready reference, it is only necessary to again call into use the decimal subdivision, assign corresponding subdivisions of the subject, add the decimal to the reference on the cards, and index and record is again complete with the more minute classification.

This system adopted, the records of the Bureau would be found filed by countries, maps and texts separately, indexed with a double set of index cards arranged alphabetically and numerically. The records will be fully and readily available for use when required, and with the index and files capable of

indefinite expansion without confusion or undue increase in the labor of indexing and filing.

DISTRIBUTING INFORMATION.

It has been estimated that it costs the United States government about $10,000 to secure the services of one officer for the Army by graduation from the U. S. Military Academy, and his education as a soldier has then only just begun. The only further stimulus to the acquisition of knowledge is the necessity of passing an examination at each rise by promotion until he reaches the grade of Major, when even that is discontinued. Few officers fail to pass the promotion examinations, and it may be truthfully said that from the time of his entrance into the Army, the amount of study done, and the professional improvement shown, is largely a matter of the officer's own personal inclination. Many officers, however, have a real and lasting desire to improve themselves in their profession. To these, the distribution of information by the Bureau of Military Intelligence could be made a source of pleasure as well as profit. The Bureau of Military Intelligence naturally comes into possession of a great deal of information, a general knowledge of which would result in benefit to all officers.

In one department of the army, every item of military interest and of general importance is immediately communicated to all officers of the department in order that the improvement which experience, ability, or special opportunity may develop in one officer may be available for all. Each officer may thus in his specialty be the tutor of all others. The Bureau of Military Intelligence should stand in the same position with respect to the rest of the Army. The information derived from all sources should be placed at the disposal of all officers to whom the information is of importance, and, furthermore, *they should be required to profit by it.* In the initial stage of an officer's career at the Military Academy, there is no hesitation about requiring him to absorb knowledge of professional value at the maximum rate consistent with graduating a reasonable proportion of those who enter. Why, then, should not the system of compulsory education in milder degree be continued? If each officer were required to familiarize himself with all that is learned by the Bureau of Military Intelligence that is of importance to him, it is safe to say that the result

would be a decided increase in professional information throughout the Army. The Central Board above outlined would be fully capable of preparing, or supervising the preparation for publication of the matter in hand. The expense of printing these documents from time to time would be small in comparison with the result achieved, and each officer affected by any information obtained by the Bureau could be supplied with a copy.

With the publications issued by the Bureau, should be mailed to each officer a blank form for receipt, and in that form should be included a certificate that the publication whose receipt is acknowledged has been carefully read, and that its contents are understood. This receipt and certificate should be required to be returned by the officer within a definite length of time after the delivery. The length of time which might elapse before the officer would be required to return the receipt for the publication should be governed by the length and character of the publication, and would be determined by the Board in each instance. No single publication should be of great length, or cover more than one subject, both for the convenience of those officers who care to file and index their professional papers and notes, and to prevent any tendency to careless reading. The full benefit of this method of instruction of officers could be derived only by presenting the subjects singly and at such intervals as to admit of proper assimilation. Articles would frequently be published which would be of interest only perhaps to a single branch of the service, and the Central Board should exercise care to send them only to those officers to whom the publications are of special importance.

There remains to consider the question of encouraging and assisting the studies of those officers who are devoted to their profession, and anxious to increase their usefulness by study along special lines, and here lies a broad field of usefulness for the Bureau of Military Intelligence. Let us suppose that an officer desires to pursue a certain line of investigation or improvement. The system of indexing the records of the Bureau proposed lends itself admirably to this case. Upon application from an officer for assistance, copies of all the cards covering the information in possession of the Bureau pertaining to the particular subject could easily be made and sent to him. From these the officer could select such as

appeared to meet his wants, and proper provision should be made for placing the information in his hands, either by sending him copies of published reports or compilations, abstracts from or copies of the records of the Bureau. To illustrate the point more fully, let us suppose a particular case, *e. g.*, that in view of the present conditions in Venezuela, an officer expresses a desire to make himself a competent authority on the topography of the country, its climate, and the customs, habits, etc., of its people. Upon application to the Bureau of Military Intelligence, copies of the proper maps would be lent to him, together with the extracts from the consular reports, and all other information at hand bearing upon the subject. At the same time he would be directed to take advantage of any other sources of information that might be available. At the end of his studies, the officer applies for leave to travel abroad for the purpose of visiting Venezuela. The application will be referred to the Chief of the Bureau of Military Intelligence, who will state the previous preparation of the applicant, and recommend that the officer be directed to report to him prior to leaving the United States. The necessary instructions can then be given to the officer as to the character of the information to be ascertained by him while on leave. Upon his return from leave, he will be examined by the Central Board, and his report being satisfactory, a certificate will be given entitling him to a per diem compensation which will be a partial return for the expense of the trip. A valuable addition to the general knowledge of Venezuela would thus be made, and at the same time an officer would have familiarized himself with the Venezuelan territory to such an extent that he would be invaluable on the staff of an officer called to command our forces operating in Venezuela. Furthermore the names of the officers of particular value in special localities would thus be a matter of record in the Bureau of Military Intelligence.

An officer could under this system, as now, travel abroad as he chose, but those who desired to operate as special agents for the Bureau of Military Intelligence would be required to gain such familiarity with the country he is to visit prior to his departure, and receive such instructions as would make his observations of the greatest value.

The principal function of the Bureau of Military Intelligence is, however, to furnish all information necessary to the Chief of

the General Staff. All loans of documents, maps, and publications to officers for educational purposes must, therefore, leave the files of the Bureau complete for the use of the General Staff. The files of the Bureau will, as before outlined, comprise the topographical and statistical sections, each indexed and filed separately by countries. The files of the Bureau can not possibly be in such state as to instantly furnish all the copies of maps, etc., required for use in case of military operations in a given territory. The map department especially would possess only a limited number of copies of each map, only sufficient for the earliest and most urgent calls, and could not possibly possess the plates for printing. As many copies should be procured of all the more important maps as the allotment of funds will allow, and the equipment of the topographical section should be such as to permit rapid duplication by blueprint, photographic, or other process, so that serviceable copies of maps could be quickly made. Many of the reports and other documents would be printed, and as additional copies cost but little, a sufficient number to cover all contingencies should be ordered. Other portions of the files could be rapidly duplicated by mimeograph or other similar process.

THE ORGANIZATION OF A BUREAU OF MILITARY INTELLIGENCE.

The sources and character of information necessary,and the general outline of the methods to be used in obtaining it, have been given above. The personnel of the Bureau of Military Intelligence must be capable of doing the work assigned to it. The Bureau has already been shown to be a logical subdivision of the General Staff, and its commissioned strength must be drawn from the officers detailed thereto. In this discussion it is assumed that the detail system will obtain in our Army for some years at least. Unless such care is exercised in the detail of officers for the General Staff Corps as to insure the very best material, the Staff system will fall to the ground, and under any circumstances the General Staff will eventually comprise the best brains of the Army.

The Bureau of Military Intelligence will have a personnel of picked men. At its head must be the Chief of the Bureau, who should properly be a Brigadier-General, and his duties would specially fit him for service on the Board of Control

of the War College. The Chief of the Bureau should be responsible directly to the Chief of the General Staff Corps for his work. Associated with the Chief of the Bureau and forming a Central Board of the Bureau of Military Intelligence should be two other officers not below the rank of field officers, selected purely for their ability and military attainments. Some of the duties of the Central Board have been previously outlined. The performance of these duties requires that the officers composing the Central Board shall be detailed from different branches of the service, for no officer can reach the grade of field officer without having been irremediably endowed with a special belief in his particular branch of the service, and it is important that the Central Board should be general in its character and diversified in its talents. Except that the Bureau can not be made unwieldy, a central Board consisting of one officer from each combatant branch of the service would be advocated. A Board of three officers, if properly selected, would secure the desired result. The Chief would be assisted by these two officers in the supervision of the work of the Bureau. The appointment of military attachés should be subject to the recommendation of the Central Board, and when any officer is assigned to this duty he should be detailed for duty with the General Staff, assigned to the Bureau of Military Intelligence, and should report directly to its Chief. The necessity for the employment of special agents and their compensation should be under the control of the Central Board, subject to the approval of the Chief of Staff and the Secretary of War.

In addition to the Central Board, there is necessary a sufficient number of commissioned officers to do the remaining work outlined for the Bureau. The statistical section of the records would require the supervision of a major, who might also be the junior member of the Central Board. He should have two captains as his assistants, and a sufficient clerical force to do the recording and indexing. These three officers would supervise the work of recording and indexing the statistical records, and make recommendations to the Central Board as to the portions to be printed for distribution, and prepare the matter for publication when required by the Central Board.

The topographical section of the records should be under the charge of an Engineer officer detailed to the General Staff

for this duty. The records of this section of the Bureau would be much less voluminous than those of the statistical section, and one officer of the grade of captain would be sufficient to handle the work, assisted by the necessary clerical force.

One officer of the grade of captain should be assigned to duty at the office of the Bureau as recorder to the Central Board, and disbursing officer of the Bureau.

The total commissioned strength of the Bureau of Military Intelligence would, therefore, comprise the following:

One Brigadier-General, Chief of the Bureau.
One Colonel, member of the Central Board.
One Major, member of the Central Board, and in charge of statistical section of the records.
One Captain, recorder of the Central Board, and disbursing officer of the Bureau.
One Captain, in charge of topographical section of the records.
Two Captains, assistants to the officer in charge of statistical section of the records.
Six (approximately, but variable) Military Attachés.

Total, thirteen officers, whose entire duty is in connection with the Bureau of Military Intelligence. These officers must be detailed for duty with the General Staff, and assigned to the Bureau of Military Intelligence. In addition to these, it must be remembered that the services of the District Engineers, of the officers acting as special agents, and of officers ordered before the Central Board for examination, are required to complete the scheme for collecting information.

The officers of the Corps of Engineers cannot be directly controlled by the Chief of the Bureau of Military Intelligence, but while the proposed legislation makes the necessary provision for the co-ordination of the various departments, so far as troops are concerned, the services required of Engineer officers could only be obtained by order of the Secretary of War. The harbor and fortification works are the most important duties of the officers of the Corps of Engineers, and the topographical work required would necessarily be performed in the manner and at the time most convenient in connection with other duties. This could be arranged by general instructions from the Secretary of War to the Chief of Engineers, and the latter could control the work of the officers of his Corps as above indicated.

The funds for the operation and support of the General Staff would necessarily be controlled by the Chief of Staff, and all disbursements made by the Bureau of Military Intelligence would be made from funds allotted by the Chief of the General Staff Corps for the use of the Bureau. It will thus be seen that a special appropriation must be made for the support of the General Staff. For the services to be performed for the Bureau by the District Engineers, the necessary funds would have to be transferred by the Chief of Staff to the Chief of Engineers, and by him allotted to the District Officers, so that the method proposed for collecting topographical information of our own territory offers no special difficulty. The other disbursements of the Bureau, being by the Bureau for its own purposes, would be made by the disbursing officer of the Central Board.

THE DUTIES AND ORGANIZATION IN WAR.

In time of peace, it has been shown that the Bureau of Military Intelligence is the main source of information upon which are based the plans of operation formulated by the General Staff. Manifestly it should continue to be the channel through which the Central General Staff is kept informed of the course of events to the degree necessary for a general control of the operations of different armies in time of war. As soon as active operations begin, it becomes at once impossible and undesirable that the Bureau of Military Intelligence should continue to be the means of obtaining the information which controls the operations of the armies that are in contact with the enemy. The personnel of the Bureau could not possibly be expanded to the degree necessary to furnish officers to take control of the information service of the armies in the field. The duty then becomes complicated with the secret service, and both this and the regular service of information must be controlled by one who is selected by, and has the confidence of, the commander of the force, since he must stand in confidential relations with the commander. Satisfactory service requires that the Chief of the service of information of the army in the field should know more about the plans of the commander than would be possible for one not possessing his complete confidence. Information derived from different sources requires a medium of transmission,

which is readily formed by continuing the peace organization of the Bureau of Military Intelligence, and adding the necessary increase of strength to perform the augmented duties. The Military attachés, as well as all other sources of information in neutral countries must be kept in service, because information of the greatest value may in these days come in time to be of use through the most circuitous routes. It is evident that in time of war, information of the utmost importance to the commander in the field may be received at the Bureau of Military Intelligence. The best results, therefore, require a complete co-ordination of the work of the Bureau of Military Intelligence and the service of information connected with the Army in the field. Much of the information collected by the latter will be of importance only to the particular force engaged. Other information might be of importance elsewhere. The responsibility for deciding this question should not be thrust on the information service attached to the staff of the commander in the field, which is already overburdened with the arduous duties it has to perform.

It is proposed to attach to the headquarters of each independent command in the field of sufficient size to warrant it, an officer from the Bureau of Military Intelligence to act as the intermediary between the Bureau and the information service of the command in the field. His duties should be to communicate to the information service of the army in the field such information as came to him from the Bureau, and in turn he should have free access to the records and information in possession of the field service, in order that he may transmit to the Bureau any information of general importance. The necessity for some such arrangement will become apparent on investigation. The information service of the field army is too intent upon securing information of vital importance in connection with its own work to be able, or to have the time, to analyze the information in any other light than for its own use.

It is desired to emphasize the essential difference between the information sought by the information service of the field armies and that needed and collected by the Bureau of Military Intelligence. The sources of the information derived in the field are the cavalry screen, reconnaissances, spies, prisoners, deserters, scouts, patrols, military police, the telegraph, post, and various other similar sources. It is the immediate

presence of the enemy, and the disposition of his forces at a particular point at a particular time, that will control the movements of the field army at that time. The information to be of value may be possibly required to be not more than a few hours old at most, and must be collected and made available immediately or the information may be too late to be of use. Therefore all information must be forwarded with the utmost expedition to headquarters. The information desired and to be collected by the Bureau of Military Intelligence is of a more permanent character, and might not be of use to the commander of the army in the field. Take, for instance, the final campaign of the Civil War. The co-ordination of the operations of the armies of Generals Grant and Sherman could be rendered complete through a general knowledge of the positions of the two armies and their Confederate opponents, though this knowledge would be insufficient in detail to be of assistance to either commander of the Union armies, while detailed knowledge of the positions occupied by these armies would be unnecessary and undesirable in the Bureau of Military Intelligence. It is thus seen that the information service of the field army is largely for the tactical co-ordination of the different units of the army, while the information passing through the Bureau of Military Intelligence is largely for the purpose of directing the strategy of the campaign, and co-ordinating the movements of separate armies for the purposes of war. The tactical service of information must be conducted by the staff of the army in the field, while the strategical service of information in war must be conducted through the Bureau of Military Intelligence.

There should, therefore, be an officer attached to headquarters of the field army who is in touch with the Bureau of Military Intelligence, and who could work over the information with a view to detecting the items which would be of importance in other fields, and serve as a medium of transmission of the information in possession of the Bureau of Military Intelligence which it is desired to impart to the information service of the field armies.

Aside from the increase of personnel necessary to carry out this idea, the organization of the Bureau of Military Intelligence would remain the same in war as in peace. This increase in personnel would comprise the addition of one officer of suitable rank for each army, or independent command in the field.

The detail system lends itself admirably to this scheme, as there would constantly be sent back to duty with troops officers who had served their apprenticeship in the Bureau of Military Intelligence, and who would be already trained for the service at the outbreak of war.

The functions and organization of a Bureau of Military Intelligence conceived to be suited to our needs have now been given. The faithful performance of these duties will serve to point out what is necessary to be done in order that we may meet our foes with the chances of success as greatly in our favor as possible, but there the usefulness of the Bureau of Military Intelligence ends. It is of no avail to point out our needs, if no action is taken looking toward supplying them. It will avail nothing for the agents of the Bureau to report that foreign services have made such advances in organization, equipment, or methods of attack that our own service is out of date, if the reports are pigeon-holed and the necessity for improvement is allowed to pass unheeded.

No good result will follow from the knowledge that a probable antagonist can put in the field an army of specified strength at a certain point, except to ingloriously avoid combat, unless the United States is prepared to meet that army with a force sufficient to overcome it. In vain did the French military agents in Germany send in their warnings of Germany's state of preparedness prior to the opening of the Franco-German War; they were suppressed and unheeded, and all chance for a successful issue of the war was lost.

The Bureau of Military Intelligence will keep us informed concerning our military necessities. The General Staff can be trusted to formulate plans to use our military power to the best advantage; but only by legislative action which will develop military power in proportion to our needs can the issue of a trial at arms be placed beyond reasonable doubt.

D. O. W., 26.

Silver Medal Prize Essay, 1902.

THE ORGANIZATION AND FUNCTIONS OF A BUREAU OF MILITARY INTELLIGENCE.

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THE objects sought in the creation and maintenance of a Bureau of Military Intelligence fall naturally into three classes:

1. The collection and preparation in useful form of all information which in case of war with any country it would be necessary or valuable to have concerning the enemy. This information would, therefore, comprise knowledge of all his military resources, study of the scene of probable operations, and comprehension of his physical and moral peculiarities. Since war is possible with any power, singly or in combination, and since its theatre may be any portion of the earth's surface, including the home territory, the inquiries to be complete must embrace all nationalities and all regions of the globe.

2. The study of all systems and means of defence and attack employed in foreign countries in order that discoveries, improvements and progress made abroad may be known and applied at home or met and equaled by domestic effort. This enquiry need be extended only to those nations whose genius for war and whose military organization are known or suspected to be excellent, or those whose output of warlike material has a quickly recognized value.

3. The periodical dissemination amongst the officers of the Army of such information from abroad as will be most useful in aiding them to perfect the home army's efficiency, to understand the ability, strength and methods of possible antagonists, and to keep their standards of efficiency in all directions abreast of the highest. These functions of a Bureau of Military Intelligence will now be considered more in detail, after which the organization deemed best to accomplish the ends proposed will be discussed. It is presumed that the intention in offering this subject for a prize essay was to elicit

a study of our own needs; for this reason and to disengage the wording from all ambiguity, the question will be treated in its bearing upon the United States Army, and, as far as possible, offering only such considerations as are useful to us and possible to our system.

1. THE COLLECTION OF DATA FOR USE IN CASE OF WAR.

This is usually considered the most important and it is certainly the most delicate function of an intelligence office. It is the accuracy of this data, judged by the supreme trial of war, which brings the greatest credit to the office concerned, just as its imperfection leads to unending accusation and recrimination. The work of the German Intelligence Office before the Franco-Prussian War gave it the reputation it still enjoys of being most thorough; the constantly alleged inefficiency of the English office in what concerned the South African countries has brought it at home and abroad into a disrepute which, whether deserved or not, will cling to it and mar its prestige until some future occasion enables it to confound its critics.

Much the same may be said of what concerns our own bureau in its preparation for the Cuban campaign. Just how ready and accurate its information was is naturally known only to a few officers whose business it is to be discreet; but the army at large believes that, after years of impending war with Spain, our intelligence office did not have on hand ready for issue at the outbreak of hostilities the maps and detailed information required by an invading expedition.

The Philippines offer a vivid illustration of the difficulties and duties and possibilities of a wideawake and fully equipped intelligence office. When the first expedition was ordered to Manila in May, 1898, a crude map and extracts from the Encyclopedia Britannica constituted all the information placed at the disposal of the General commanding the invading force by the Intelligence Department of the Army.* It is true that no one had imagined the United States could by any chance ever want to land a force in the Philippine Islands, and the Adjutant-General, the Secretary of War, and the Military

*This statement is made as a useful illustration and is in no way meant as a criticism of the Military Intelligence Division as conducted previous to 1898. That division unquestionably did as good work as it was possible to accomplish with the meagre appropriations of money and men allowed it, and the imperfections of its organization. For these things the chief and his officers were in no way responsible.

Committees of Congress would probably have laughed at the Chief of the Information Division had he asked for money or officers to send on a mission to these islands. And yet we had been on the verge of war with Spain more than once and during long periods; the Philippines were Spanish possessions and a good intelligence officer should have imagination as well as an appetite for facts.

If, on the day it was decided to send an expedition to the Philippines, the Intelligence Bureau had been able to furnish a concise sketch of the climate, races, languages, etc., of the islands or of the country near the largest towns, information prepared by military men for military men, unending waste and worry would have been saved every department of the Army, and the Intelligence Bureau would have at once received credit for preparedness.

This preparedness is almost the whole duty of a chief intelligence officer. He must be ready at the most unexpected times and in the most unexpected places, and always beforehand. When war comes, his office loses most of its importance, transfers its best officers to the armies in the field, and has its functions taken over by some man in a distant land.

Anticipation of all the questions that will be asked when an expedition is about to set out, beginning with the most important, requires imagination as well as knowledge and industry; these the chief of a bureau of intelligence must have; the Government must furnish him with money and be liberal in asking an account of it.

It is needless to further insist upon the importance of getting beforehand the military data of even the most unpromising of possible scenes of operation, for the above illustration is one which can be enlarged upon by most of the officers of our Army.

How and by Whom Information Is Gotten. Each country has its own system for collecting the information relative to the strength and dispositions of its possible enemies, and the part of this work which deals with confidential matters is, of course, kept secret; enough, however, is known of the methods of the most highly organized military establishments to enable an understanding to be had of the general practice.

Certain of the information sought is public and readily tabulated. The strength and organization of the active and reserve army of all civilized powers; the armament of the

various branches of the service and the nature of the armament of the forts; the transportation facilities by road, railway and water; the ships available; the total effective of the country's horses, mules, wagons, etc.; the time required to mobilize a given effective or to transport it a given distance; the reserve supplies of stores; the ability of shops and factories to turn out warlike supplies; the range and efficiency of the weapons used; the state of instruction in target practice, marching and discipline; the probable value of the higher officers and the financial strength of the Government—all this data can be extracted and kept to date from the annual published budgets, proceedings of parliament, public reports and military journals of the country concerned.

The preparation and continuance of this data is a matter requiring only intelligence, industry and good assistance in the home office, supplemented by the reports of the military attaché, on those matters where his intimate knowledge of the country, people and government make his opinion valuable or even necessary for a final judgment.

The best existing maps of any country, whether of the interior or of the coast, can be openly bought; those which do not show the location of important military works can have those works added from the reports of competent observers, and this is done or not on a general and complete scale depending upon the importance of those works to the country seeking the information and upon the effectiveness of its intelligence office. It would plainly be unnecessary for the United States to go to great trouble to get information concerning the eastern frontier of France; it is quite important to Germany to do so; France has small interest in the Canadian works along the Great Lakes; the United States neglects its duty if every possible means is not employed to get the minutest details of all the defences of this region.

Having glanced at the information readily obtained from public documents, we come to that which is had only through special agents. These in general are of three classes (a) Military Attachés, (b) Government Agents having other duties abroad (as consuls), (c) Special Agents (as officers travelling or sent abroad; also paid spies).

(*a*) *Military Attachés.* One need not be a man of great ability, but he should be a man of many medium talents; he need not be a specialist, but he must be thoroughly well edu-

cated; his chief function is to glance at many things; he can have time to thoroughly study only a few; he indicates what should be done and can be done by others, not having the time to do all himself; therefore his judgment and his reserve must be marked. As member of a minister's staff he has many official and social duties, and he typifies to a whole country the American Army; he cannot, therefore, be too much the officer and the gentleman. He may fill all these requirements and be of very little use to the service if he does not speak with ease the language of the country to which he is sent and have an immense capacity for work.

This officer is the immediate agent of the Chief of the Intelligence Bureau of the Army; the relations and mutual understanding between them should be close and continuous, and he should not be appointed except with the latter's approval. He should serve in the Intelligence Office for at least four months before going to his post, during which time he should have charge of the work pertaining to his future duties and be carefully trained by his chief.

A military attaché should be paid, irrespective of his rank, $5,000 a year in order to meet the obligations of his position; besides this he must be supplied with money for official purposes. Money will enable him to employ in a perfectly proper way competent persons for the preparation of assigned work of great use to his government and which he could not do himself.

The line between what is legitimately confidential and what is literally disloyal in the work of a military attaché is drawn by various countries in various places, but it is believed that the American practice of limiting the inquiries of our officers to legitimate methods and objects is correct in principle and productive in the long run of the best results. A military attaché is a member of a minister's staff, enjoys diplomatic immunity, and occupies a place analogous to a guest; he should conduct himself accordingly and none of his acts should be such that, if discovered, they would injure the friendly relations existing between two governments or cause his native country to be suspected or disliked. The cases of when friendly relations do not exist or when the attaché acts wholly at his own risk and without orders are not within the scope of this essay.

The plainly indicated duties of a military attaché are sufficiently important and onerous. He makes such a study

of the organization, armament, training and methods of the Army which falls to his lot as will constitute him an expert on that subject and especially equip him to seek in the proper place the answer to any question which may arise concerning it. His reports and the documents he furnishes enable the officer at the home office to correct and augment his data and serve as a check upon information from other sources; as a resident and traveler his opinions and observations as to men, measures and localities should be of value, as well as his comparative appreciation of the war efficiency of the various elements of the Army considered.

A military attaché's chief duties concern the second of the three classes into which this subject was divided at the outset, and will be considered later in that connection.

(*b*) *Government Agents Having Other Duties Abroad.* It is the practice of some highly organized military powers to make their consuls and consular agents in foreign ports the source of more or less extensive information regarding military affairs, especially coast defences.

The difficulty with this system, above all for the United States whose consuls are constantly changing and are rarely men of the most rudimentary knowledge of military affairs, is that the information furnished has often to be confirmed by some military observer. Consuls generally do not know a light quick-firer from a ten-inch gun, and their reports as to sea coast works begun or continued are often so misleading as to be conducive to nothing but confusion.

In some countries retired or former officers of the Army or Navy are frequently appointed consuls, and the reports of these men upon the defences of the cities where they live should be of considerable value.

We may be sure that foreign consular agents in United States cities, especially those at the more out-of-the-way ports, keep their government informed of works going up in their territory, and the same practice might be tried with American consuls, especially in the more distant countries, in order to see what value can be attached to their work. Their reports could be sent to the military attaché, where there is one, or confided to a special agent for opinion as to their value.

There seems reason to believe that in what concerns

Asiatic or South American countries this European practice might be tried by us with some chance of profit.

(*c*) *Special Agents.* Officers requesting leave to go abroad, officers traveling under private instructions and paid spies, constitute the most valuable source of information on confidential subjects amongst the jealous and rival powers of Europe.

An officer who, of his own initiative and at his own expense, travels in a foreign country and brings back new, valuable and accurate information regarding its defences is sure of reward. If he is detected his action is naturally disavowed, and if delivered up he is punished openly. Officers or ex-officers are sometimes given leave and allowed to travel or live abroad for the purpose of getting information needed on certain matters, with the distinct understanding that if they get into trouble they must not inculpate their government, which always absolutely disavows any knowledge of their actions, or (if possible) the fact that they have any official or military status.

In the same way paid spies, whether regular secret agents or men paid by the job and according to what they deliver, furnish each country with information concerning the others. Often these men are given large sums of money for the prostitution of employees or officials through whom they obtain documents of value.

It is to be said that this practice is not going on at present on such a scale as it probably was twenty-five years ago. For one thing the material is more or less exhausted. Every European country knows nearly all there is to learn about the defences of its neighbors, and at present it is only necessary to keep track of changes and additions or to send a special man to get details of any new and important modification or invention in general operation.

Perhaps the widest and most virgin field for this kind of work open, at present, is the United States.

The relations which the class just considered have with the military attaché to the country in which they operate varies with the time and country. There are few of our officers who will not agree that when the American Intelligence Bureau considers it necessary to employ these agents they should have no relations with our attachés and should report directly to the home office.

These agents are employed and paid either by the general secret service or by the intelligence bureau of the Army. In any case their reports go to the latter. In the annual army appropriation act of most European countries will be found regularly inserted an item "for secret expenses, so many hundred thousand dollars." Out of this the chief intelligence officer or the chief of the military surety pay the agents who collect information abroad or those who at home shadow and obstruct foreigners engaged in similar work.

It is no part of the functions of this essay to enter into the ethics of this question. We all know that many distasteful things are done by the most honorable of men in war; the safety of a nation in time of peace and in preparation for possible war is a trust so grave that responsible men are forced to acts which as individuals they abominate. In war the spy and the employer of spies are honored if they serve their country; they may save her similarly in time of peace.

The point for us to decide is, shall we fight the devil with his own weapons or keep our hands clean and risk finding an enemy some day armed with our secrets while we know none of his?

We have now finished the consideration of the first of the objects for which a bureau of intelligence is maintained, viz., the collection for use in case of war of information concerning any possible enemy and theatre of operations.

It may be said, in brief résumé, that the sources of this information for an American Intelligence Office studying European countries, especially the great powers, should be statistics, government and other military publications and maps; the reports of military attachés, of other officers sent to study a country, and of special agents employed to secure information on definite matters of vital importance.

With regard to South American, Asiatic and African countries, a systematic study, beginning with the most important to us but eventually embracing nearly all, should be undertaken. To this end liberal allowances of money are necessary in order that officers of our Army or competent civilians may be properly supplied and sent to travel and observe for the purpose of collecting that data which would be most important did the United States find it necessary to send an expedition to any of these shores under conditions such as prompted the Manila expedition of 1898. Officers for this

duty should be selected from the Army at large, should serve under the chief intelligence officer long enough to get a clear idea of what is most required in their new work, should be liberally supplied with money, and should be given time to make their efforts a real success. The personal qualifications of such officers are too evident to need remark.

We now come to the second of the objects sought in maintaining a Bureau of Military Intelligence.

2. TO FURNISH MEANS OF KEEPING OUR ARMY ABREAST OF FOREIGN PROGRESS.

Each country has certain defects and excellences, civil and military, generally recognized abroad and frequently acknowledged at home. In military matters this reputation—good or bad—is subject to rude shocks when the trial comes, and nothing demands a more deliberate, unprejudiced and intelligent examination on the part of those whose business it is to know things accurately than the true military efficiency, physical and moral, of our rivals. Popular and unprofessional estimation is hopelessly insufficient to the forming of an opinion.

Omitting anything more than a reference to the sad revelations of the Franco-Prussian War, or the ridiculous misconceptions on both sides during our Civil War, it is sufficient to call attention to the fact that to-day in the minds of most traveled and intelligent Americans the German Army is the finest on the globe solely because its men wear clothes that fit them; to all of continental Europe any soldiers seen in slouch hats and the cartridge belt *en bandoulier* are necessarily dead shots and born scouts, solely because the Boers are all pictured in this guise.

An intelligence officer of course furnishes the chiefs of the Army and the general staff, apart from their own studies, with a surer means of appreciating the value of other services; but it must do much more. Wherever is found any element of military strength in which we are not equal to the best it should be unflinchingly pointed out, that the proper remedy may be sought by those having power to act. To be able to do this, the office must have a regular flow of carefully selected information from the centres of the most advanced military thought.

It is here that the personality of the chief intelligence officer, his assistants and miltary attachés, come most promi-

nently into play; where the directive judgment of the one and the selective judgment of the others is to be seen in immediate results; where, in other words, the "team work" of the bureau becomes a most important factor.

The function of the Intelligence Bureau now under consideration is that which enables it to furnish the executive and legislative authorities having control of the Army with the means of accurate examination and comparison; it indicates wherein ours is deficient as compared with foreign services, but necessarily leaves to others the determination of the remedy and the necessity of its application.

In this way a well-equipped bureau of intelligence is one of the most useful organs of a general staff, or of that body which performs the duties of a general staff, and in no country is it more essential than in ours.

In the manly qualities that go to make the soldier, and in the molding of the green material for its corps of officers, America is particularly fortunate; but in the matter of organization and direction of our military affairs we suffer from the difficulties inherent to all free countries as compared with despotic ones; moreover, we are wholly lacking in any intelligent public opinion on military affairs (such as exists in Europe). which may serve as impulse or check upon legislators themselves devoid not only of military knowledge but of military sympathy and instincts.

In the contemplation of military and commercial affairs, Europe and the United States offer an interesting inverse comparison.

Europe possesses in general a most industrious, abstemious and clever laboring class; her commercial houses are directed by men of long experience backed up by their governments, and for decades they have been in possession of the best markets of the world. To-day these business men find themselves overridden by American rivals in almost every department of industry. Why? Because, and frequently solely because, of the superior organization of the American industrial army. The result is that the most burning question all over Europe to-day is how to meet American competition; and government commissions, agents of great firms and private parties, flood the United States seeking to learn how to do it.

Turning to the military side, we find that the United States

possesses a material in officers and men second to none in military qualities and backed by limitless resources; but to say that, taken as a whole, its Army possesses the readiness and efficiency of a sharpened instrument equal to the best in Europe, is to express only a patriotic boast. The reason for this is that, just as we are superior to Europe in commercial organization, continental Europe is superior to us in military organization, and we cannot do better than to study the most advanced of our rivals as in commercial affairs they study us; we need not basely imitate, but we *must* change and progress with the age and be satisfied with only the best. We need searching comparison and a high standard.

The foreign system most similar to ours, the English, has recently given shining proofs of the faults of its early 19th century organization; there is hardly an officer of our Army who does not believe that only extraordinary luck and the moral weakness of the Spaniards prevented our criminal lack of organization from being similarly shown up in the Cuban campaign.

Thus our separation by the ocean's width from all the highly organized military countries of the world; our distance, in fact, from the centres of intense military activity and thought, tends to a dangerous in-breeding in military ideas and a slowness to note important changes.

Berlin is only a little over twelve hours from Warsaw or Vienna, not much farther from Italy or France; propinquity, the opportunity to go to the spot, see and examine, return, think and compare, have as powerful an influence in military matters as in art or industry. No amount of time spent in the library can wholly replace the vivid impressions of study on the spot, and our great distance from the rest of the armed world must be overcome for our officers by the activity and accuracy of our intelligence bureau.

This brief glance at the food and environment of our military intellect seems sufficient to prove, were argument necessary, how gravely important to our system is that branch of the staff which, if often only in imagination, must camp in the field with foreign armies, march with their men in mimic campaign, stand on their proving grounds, sit in their chemical laboratories, listen to the lectures of their ablest professors, and extract from all the lesson of what is best for our military health, what is indigestible in our democratic stomach, and

what is absolutely essential if we are to be fit and hardy when a sudden trial comes with a worthy opponent.

The means given the Intelligence Bureau for accomplishing this second great function which we are now considering are, (a) the Chief and his assistants in the home office, (b) military attachés, and (c) special missions of officers sent abroad.

(a) *The Home Office Work.* In the home office, in addition to general work, classification, indexing, correspondence assigned and occasional job work, each officer has his specialties both in the matter of subject and of language, and it is his duty to examine critically and set down in a brief whatever is found of importance in the various publications and reports received; and, when necessary, to prepare requests for further information from or confirmation by the military attaché and submit them to the Chief Intelligence Officer. An important change in method, organization or material brought to light from any source of offering a suggestion valuable to our service would be sent by the Chief in definite and useful form to the head of that branch of the military service most interested. In this way the Bureau performs its office of keeping each department or specialty informed of foreign progress in its line. It is of course for this department or specialty to act on the information or not as seems necessary.

An illustration will best bring out this side of the work of the Intelligence Bureau. One of the assistants deemed most competent in the matter is charged, among other things, with the subject of foreign target practice. Let us take the single case of small arms target practice.

Books, regulations, treatises and laws dealing with or including this subject come into the office throughout the year and from all over the world; military attachés report the status and changes in the countries to which they are accredited or answer definite questions which may have been sent them pertaining to this subject. All these, by whomsoever received, are sent as a matter of routine to the officer interested. He quickly examines them and selects what contains new or valuable material, makes note in his infantry target practice book of what is clearly pertinent, lays aside for more extended study what seems more complicated or long or which requires examination by some one who understands the language in which it is written. This mutual assistance in language is essential. Any member of the Bureau staff who during his work happens

upon interesting target practice matter calls the attention of the target practice officer to it.

In other words, one definite duty of this person is to extract target practice essence from whatever material comes to the Intelligence Office.

At a time selected either for the importance of the material accumulated or for the opportuneness of the occasion (preparation of annual reports, etc.), a statement as brief as possible is prepared showing just how the United States Army stands as compared with other armies—especially the best—in the matter of infantry target practice; amount of time and money spent, rounds per man, encouragements offered, relation of civilian shooting societies to the Army, practice under war conditions and of large bodies of troops, etc, etc. This statement having received the approval of the Chief Intelligence Officer is sent to that officer having charge of infantry target practice for the whole Army, who will use it as occasion may require for a presentation of our needs to the Secretary of War or Congress.

A similar short comparative statement would be drawn up for field artillery and coast artillery target practice; for maneuvers, their extent and cost, and for other topics of prime importance to the ever present question: "In what respect is our Army not ready, or less ready, than other armies to take the field? In what way may the yearly routine of instruction be modified so as to better prepare the army for its mission?"

The brief statements now being considered are made without being asked for and solely upon the initiative of the Chief Intelligence Officer. Their preparation having gone on throughout the year, it is very simple to draw them up. Certain subjects are of such continued and vital importance that this method recommends itself at once; others are of momentary interest and would be prepared only for special reasons which the state of army legislation, organization or discussion would dictate. Other similar statements, again, would be made only upon application from an official having the right to call upon the time of the Bureau.

The form of these statements prepared in the Intelligence Office is important and should receive the imprint of the Chief's care and experience.

For the most part they should be the briefest possible exposé of facts; the details, from a bundle of reports to a whole

library, can be supplied if wanted; but these résumés of the comparative state of the service on such and such a subject are intended to be read where they will do the most good, and that means by busy men; they should have the force and density of projectiles, sure to take effect upon a Chief of Staff, a Secretary of War or a Congress committee.

It is wholly unnecessary in the work we are considering to relate what is done abroad, unless it is being done somewhere better than by ourselves; it is important that we know exactly where we have fallen behind in the march of military progress, for as soon as the inferiority begins to be serious steps must be taken to correct it.

So much for the routine duties of the office staff of the Bureau of Intelligence in what concerns its work of furnishing facts to those who must have them in order to set for our Army in each element of preparation for war a standard as high as the highest attained elsewhere.

We come now to the next class of agents who serve to keep our Army informed of progress abroad.

(b) *Military Attachés.* The qualifications and duties of these officers have already been glanced at; we have here to concern ourselves only with their work in keeping in touch with military progress in their respective territories and making reports of their observations to the home office.

There is no limit to the subjects which may be covered by their reports, but quantity is no measure of their value and to be useful they must be pertinent to our needs or our system; to write reports on subjects which are simply of great military interest is to waste time which should be otherwise employed. An attaché should ever keep in mind that what he writes must be applicable to some need or convincing as to some principle; must correct some error on our part or establish the fact that we have nothing to learn from a rival; it should either enlighten or console, but it *must* be accurate.

It would serve no purpose to enter here into the details of the regular work of a military attaché; this will be a function of his personality, tastes, education, industry and the orders he receives from his Chief; most of his work he must find for himself, and in nothing will his fitness be so well shown as in his selection of subjects for voluntary investigation. It is here that his previous service in the home Intelligence Bureau will be of great value to him, enabling him to know what is

sure to be useful to the Bureau and what has already been exhaustively treated. Here, too, his chief can give many hints, encourage his efforts or save him waste of energy.

His dealings with the innumerable inventors, who always besiege the representative of the land where money is believed to stand in bucketfuls upon the sidewalk, will take much time and require judgment and patience, for he may some day entertain an angel unawares.

Each country presents a different field of specialties to the military observer, and it should be the care of the Chief Intelligence Officer in preparing an attaché for his post to indicate what seems the line of work which in a given country will be most useful to our service. In one it will be organization and instruction; in another cannon foundries and steel processes; in another the volunteer or militia system; in another the schools, etc., etc. Whatever in the military organizations or productions of any country is recognized as a standard of excellence should claim the attaché's closest attention, while those things in which it is known not to excel should receive only sufficient study to keep us informed of the strength or weakness of a possible enemy.

These reports on special subjects will occupy all of the time left after the routine examination of newspapers, reviews and books of military interest, the preparation of newspaper clippings, which often give valuable suggestions to the home office, the visiting of schools, foundries and military establishments and the cultivation of those relations which permit a close and accurate insight into the military affairs of the country.

In States where annual maneuvres are held, the opportunities they present for useful observation and personal instruction are too evident to need further reference.

Some of an attaché's reports will be of such value, originality or completeness as to serve as first-hand documents to be transmitted to the Chief of Staff, to the head of a corps (as the Ordnance or Engineers) or even to the Secretary of War; but as a rule a military attaché is simply a feeder to the great intelligence mill in the War Department, where his reports are digested and the abridged results made a part of the complete brief there being formed on each important military topic.

The freedom from military control necessarily enjoyed

by a military attaché demands of any conscientious officer all the closer attention to his duty; but if this attention is lacking, if the quality and the amount of his work are persistently poor, the Chief of the Bureau of Intelligence should have the courage to warn him and eventually ask for his recall. The post should not be given to any individual, even as a reward for gallant or efficient service, unless he has the abilities requisite to usefulness, nor should any man be allowed to remain at a post where he enjoys great liberty unless he uses his time for the benefit of the service.

(c) *Special Missions Sent Abroad.* The United States has employed less often than other countries the method of improving its military establishment by sending special missions for the study of foreign systems. In their creation of a modern army and navy the Japanese have developed this idea and practiced it on an extensive scale. Their wonderful imitative powers seem in no way inferior to their adaptive genius and the results offer a striking contrast to those achieved by Turkey and China in seeking the same end by the wholly different method of adoption *en bloc* of first one and then another European model. The Japanese army probably represents the highest expression of intelligent adaptation and assimilation of foreign ways to home wants; her system seems made up of all the best features of other armies built into a symmetrical Japanese structure.

Fortunately the United States is in no such position as Japan was when she began this modern work, but it must be admitted that in staff organization, in the system of promotion and rewards, and, with one or two exceptions, in the matter of schools, we have either to create anew or build upon European models.

The great powers of Europe, through pride and through jealousy, do not send or invite missions except to maneuvers, certain trials of material and the like; but even among these the practice of intercommunication is more prevalent than obtains with us. The smaller powers constantly send boards to study the institutions of their greater brethren, keep officers at the various schools or have them serve in the regiments.

Until four years ago in the opinion of military Europe the United States was classed in this category of "smaller powers"; to-day neither our prestige as a great nation nor the fear we inspire, nor our necessities, indicate or permit a recourse

to these methods except as employed by the greatest powers. Within this limit, however, there is a most useful application of this means of improving our military knowledge and standards.

It is easy to arrange through diplomatic and commercial channels for extended visits of expert officers to government and private works and institutions where a deliberate study by qualified men can be made of methods in which we are undeveloped. Presence of our officers in increased numbers at European maneuvers would be most useful, and fortunately the practice has already made its beginning. The holding of annual maneuvers in our own service offers an opportunity for proposing or accepting these courtesies on the dignified basis of exchange.

These considerations and those offered on pp. 12–15 if accepted are sufficient to support the importance to us of developing the practice of sending our officers abroad to study specialties in the most promising regions. Most officers would gladly accept the opportunity with no other expense to the government than their mileage, and now that the number of officers has been so greatly increased, more can be spared for this duty of collecting and then disseminating throughout our service, the latest foreign ideas.

While these missions are only occasionally proposed by the Intelligence Bureau, they should have relations with that office varying from strict dependence to simple accord, and the members of few missions would be of such high rank as to justify complete independence of the Intelligence Bureau. This is of course a matter for the Secretary of War or the Chief of Staff to adjust correctly, but in general all missions, as those sent to maneuvers, ordnance or engineer officers sent to study a specialty, officers taking a course at the schools, should place themselves in communication with the home office before starting abroad, and sometimes with the military attaché after arriving. Occasionally this action would be merely for the purpose of aiding the officers concerned in matters of form and etiquette, frequently for more important co-operation. In any case the Bureau is entitled to copies of all reports made by such officers concerning foreign processes.

3. DISSEMINATION AT HOME OF USEFUL INFORMATION FROM ABROAD.

The publication at the government's expense of useful information to the Army at large is not usually considered one of the formal functions of a bureau of military intelligence and the United States is one of the few countries in which it is regularly practised. It can hardly be denied that in this respect our custom is an improvement upon that which obtains in the older bureaux of Europe.

The intelligence thus broadly disseminated, to obtain its maximum return, should deal with subjects of present and vital interest, should present facts not generally known or obtainable, and should appear in the form most likely to attract attention and lead to study.

There are two general ways in which the Bureau of Intelligence can act: through the military journals most read by the Army and through its own publications. It is for the Chief Intelligence Officer to decide which journal will most usefully serve his purpose in the matter of any given subject, or whether a volume published by the Government is preferable.

It is believed that in the great majority of cases the wisest plan is to give reports of originality or suggestive force to the best known military journals. For example, there are few such reports which would not be acceptable to the JOURNAL of the MILITARY SERVICE INSTITUTION, and they would thereby reach nearly every officer in the Army and reach him in a way more likely to attract his attention than would a thick volume bearing the stamp of the Government Printing Office. An officer receives the latter, looks through it and says to himself he will read it some evening when he has nothing else to do; but its very size is forbidding and smacks of work, and the chances are that it will be put on his shelf for reference in case of need.

The JOURNAL of the MILITARY SERVICE INSTITUTION, on the contrary, is found in every mess sitting room as well as at home, it is picked up in idle moments as well as for serious perusal, and more men are tempted to go through its pages than will ever attack what they look upon as a "dry government publication."

The monthly or bi-monthly appearance of these service journals is also an advantage in their favor, the reproduction

of material in their pages costs the Government nothing and the matter is gotten before the Army when the subject is fresh.

We are led to conclude, then, that the following should govern an intelligence office in its duty of serving out to the Army at large the information which comes from its agents and which it seems useful to have reach the whole service or branches of it:

Give to the service journal most interested any report not confidential which is evidently instructive to our officers.

Issue in official publications only such reports or compilations of the Bureau (except catalogues) as are not accepted by the service journals or which they refuse to publish *in extenso* or in one number, and which nevertheless are of such nature that all officers should have them.

The practice of our Intelligence Bureau of issuing from time to time a catalogue of the books, reviews and printed matter recently received is of great value to the Army; therefore extend this by the publication of a complete annual catalogue. This enables an officer investigating any particular subject to have at his command many sources of information otherwise closed to him.

For its practice of lending the books, etc., from its library our bureau cannot be too highly praised. This system, with the proper restrictions, is usefully extended to include manuscripts and reports that have not been published, and it would seem well to have these included in the annual catalogue.

Only a small portion of the energy of the Intelligence Office should be expended upon preparing information for publication; the chief duty—unless the force is very large—is to have on hand in the office in useful form any information that may be needed. Selections from these compilations must constitute the main output for printing.

It must never be forgotten that the functions of an intelligence bureau are only incidentally those of a publishing office; above all the Chief should avoid as he would the plague any temptation to print for the mere sake of distributing a volume bearing the stamp of his office.

ORGANIZATION OF A BUREAU OF MILITARY INTELLIGENCE.

The functions of an intelligence bureau as sketched above indicate at once the main lines of the organization needed to give them effect. Simplicity and easy working together of the parts are the objects most desired.

The Bureau is of course one of the tools of the General Staff, a creature, a handmaid of that organism; it should, therefore, be loyal, obedient, self-effacing, thinking only of the master's service.

The Chief of the Bureau should be a field officer, preferably a colonel, of the permanent or detailed general staff, as that service may be organized. His home assistants should be selected from a list of officers which he submits to the Chief of the General Staff. Military attachés being from one point of view simply a part of the Intelligence Bureau, none should be appointed unless the Chief of that Bureau considers that he would be a useful agent of the department. The anterior service of the attaché in the Bureau enables him and his Chief to get in touch and leads to a mutual comprehension most important between men who must work to the same end while separated by thousands of miles. Most attachés of European states can, and generally do, go home readily and often, but such is not the case with ours on account of the distance of America from all the capitals where we maintain military agents. This preliminary service is then even more important for us than for others.

The relation of the Chief of the Bureau of Intelligence to special military agents and missions sent abroad has been sufficiently indicated, but the matter of civilian agents or spies offers particular difficulty in view of our Government methods, the sensationalism of our press and our national repugnance for any such proceedings.

If it is accepted that information in regard to foreign countries of a nature not to be had by open and above board means is essential to our safety, the Chief Intelligence Officer must choose and dispatch agents of his own or use the Secret Service of the United States Government already organized. The former can only be done by the grant of money not subject to the regular method of auditing; the latter requires the co-operation of other members of the Cabinet with the

Secretary of War. It is not likely that the means of action will be granted by the lawmaking power in time of peace, and in time of war it is too late to be very useful. It seems, then, from all that it is proper for us to know or say, that the American Bureau of Military Intelligence will have to get along without this powerful factor in its organization, however necessary it is to thorough efficiency and to meet the movements of more despotically organized military states.

The organization and personnel of an Intelligence Bureau for the United States Army bears no direct relation to the size of that force. We have by far the smallest army of any first-class power, but that Army has as great need of full and accurate military information as if it counted eight hundred thousand men on a peace footing. Russia has an army seventeen times the size of ours, but Russia does not need a more extensive system for collecting military information than we do. Indeed, it is doubtful if Russia has need of inquiry concerning as many and widely separated countries as we have here, or whether that information is as likely to have immediate application as is ours. She must watch and know her western frontier neighbors and India, Persia and China; but her line of observation and even of attack is open to the study in most places of the adjacent troops. Her interests in Africa, South America and Polynesia are too slight to exact military inquiry.

On the other hand, the huge and complicated trade relations which we have with the whole world, our Monroe doctrine and the openly expressed jealousy of our progress on the part of several European nations, constitute causes for friction and conflict which may come in the most unexpected regions, and with no time for preparation.

England and Germany offer better illustrations of the importance and extended field which apply to our Intelligence Bureau. Again, from the standpoint of simple study of foreign methods our needs are certainly not less than those of other great Powers.

The force, therefore, of officers, translators and clerks necessary to effective work in the home office and the number of officers and agents who should be sent abroad is altogether out of proportion to the size of our Army.

It does not seem essential to go into the details of the management of the home office, since these can only be the outgrowth of experience and will be modified by each suc-

ceeding chief, the general principles governing the organization of the whole system at home and abroad, their correlation and the ends they must be shaped to serve, are all that seems demanded of this paper, and these have been sufficiently discussed in what precedes.

It may be remarked in passing that the French, German and Russian Intelligence Bureaux have not less than twenty officers detailed to the home office; we ought to have as many, but in view of all precedent and the habit prevalent in our Army of undermanning such services, the home office doubtless will never get more than half that number. But the true standard should not be lost sight of, and every effort should be made with succeeding years to get the personnel needed for the best work.

The method of apportioning and pursuing the work in the home office suggested by the objects to be attained as we have understood them will be only briefly recapitulated:

The Chief Intelligence Officer apportions the work among his subordinates by subjects or by country according to the purpose for which the study is made.

An officer charged with a subject (as remounts, systems of promotion of officers, field artillery) keeps to date a portfolio on that subject.

Each country is assigned to an officer for the continuance of all data for use in case of war with that country or on its territory. This portfolio will be as far as possible complete within itself; to a certain extent it will be an index to reports and maps.

Each officer furnishes the others with such material as comes into his hands relating to their specialties.

The examination of books, reviews and reports from foreign countries is divided by languages amongst the office force for indexing, examination and possible posting up of "subjects."

Special work on any given subject is assigned by the Chief. The correspondence with all agents abroad should chiefly fall upon the head of the Bureau.

Each officer detailed in the Bureau must have a thorough knowledge of at least one foreign language; when a vacancy occurs a man must be sought qualified to do the work in question; it will not do to detail an officer, however able, and then find work for him. Under a general staff system only officers

who have graduated from the War College would usually be detailed for this duty.

A sufficient force of stenographers, translators and draughtsmen is absolutely essential if the work done by the whole department is to produce general effect as well as be locally thorough. These can generally only be gotten by reiterated appeal covering even years, but in the end they are to be had.

The clerks and employees in an office such as the Intelligence Bureau should be subject to a surer discipline than the mere fear of discharge, and we need a law punishing the divulgence of any confidential paper bearing on the defence of the United States.

The relations between the Army and the Navy Intelligence Bureaux should be close and if necessary regulated by higher authority. Whatever comes into one office of interest to the other should be copied and furnished without any asking, nor should they stop there. Naval attachés are often able to get information of value to the Army and not open to the military attaché, and vice versa; so, too, the training of an officer of one service enables him at times to form a correct judgment where one of the sister service could not. It is, then, for the chiefs of the two intelligence bureaux to arrange for the prosecution together of work where united effort would be advantageous, and this by their agents abroad as well as in the home offices.

The collection of information concerning any United States territory is not believed to be a function of the Bureau of Intelligence, but of another bureau of the General Staff.

In course of time the Intelligence Office will be the recipient of an immense amount of trash and the cleaning out of this merely obstructive matter should be done with a ruthless hand. The bureau cabinets should be select and full of actualities; the old material should be gotten rid of to disencumber the files, and this is as true of reports as it is of printed matter. The library, like all libraries, will necessarily gather much rubbish, but the working files must be kept clean and polished. In time of war the regular operation of the Bureau will be suspended to a greater or less extent, depending upon the importance of the war, its theatre and the forces concerned. Those officers serving or who have served in the Bureau and whose work especially qualifies them to be useful in the campaign would be recommended by the Chief Intelligence Officer for duty on the staff of the general commanding the operations abroad.

The Chief of the Bureau of Intelligence.—As a general makes an army or a captain a company, to an even greater extent the Chief Intelligence Officer imposes his personality upon his office and its output. In this position routine need have less effect upon an officer's time and habits of thought than in most others known to our profession; originality, judgment and choice are largely untrammeled, and the office force works or idles, directs its energies to useful ends or fritters them away in fancy work, largely as determined by the chief.

He must be a man of broad education and experience in the affairs of life; he must be an omnivorous reader who, like Lord Bacon, "has taken all knowledge to be his province," at least all military knowledge.

It is in no sense essential that he be a specialist in any line, but he must have the intelligence, the sympathy, the imagination, to appreciate and encourage the work of others and form a judgment as to its value. Above all, he must know how to direct the abilities of his subordinates into the most useful channels; he it is indeed who finds the bird for another man to kill.

It is a great advantage to the Chief Intelligence Officer to have served abroad as military attaché or to have had a large experience in foreign lands. He can thus best understand the limitations and the possibilities of his subordinates farthest off and will be able to get out of them the greatest amount of useful work. When a man's daily thoughts deal with foreign countries it is an enormous help if he has seen and knows—even a little—of them by actual experience. This service is a better preparation for his duties than former work in the home office.

His communication with the military attachés should be constant and sympathetic; he keeps them informed of important developments at home and suggests the things to which they could at any given time most profitably address their efforts.

His relations with his own immediate superior, the Chief of Staff, and with the Secretary of War must largely be determined by these persons; but the Chief Intelligence Officer will be at fault if he does not originate the means of being most useful to them, and no chief of staff worthy of the name can fail to find in his own intelligence bureau a constant source of suggestion and support.

As the directing intelligence of a great office he must study and estimate on broad lines the work to be done, then choose the instruments and push it to completion.

Each foreign country will have for the Chief of the American Bureau of Intelligence a different order of importance, and this will vary with the point from which it is approached. From one side, the most interesting countries to him will be Canada and Mexico, because from them alone can we be invaded suddenly and in force. His knowledge, then, of their military resources and terrain should be complete, leaving nothing to be sought after the alarm has sounded. On the other hand, in his simple capacity of student of modern military processes, neither of these countries will offer much interest, since in neither do we find original or highly developed military ideas or material; nearly everything to be found in either country can be studied to better advantage elsewhere.

The same order of ideas follows him when he examines the Central and South American States. Here the terrain, the climate, the diseases, the resources, are of prime importance; their military systems can be neglected after making a rough estimate of their force.

In his study of European nations, again, the point of view will change; things of no importance in Mexico will here take first place; things which in Canada were of supreme interest become now of smallest value.

But in whatever land, against whatever powers, whether singly or alone, whether with the natives on our side or against us, he must be ready at any time to lay his hand upon the cabinet which contains the answer to this question of the Chief of Staff: "We are preparing an expedition into such a country. What information have you to give me in making out the orders; what hints have you for General Blank, who sails in three days to take command?"

The Chief Intelligence Officer who can calmly meet this question has sharpened for the service a weapon which makes victory cheap in time, money and lives. The eventuality of ultimate defeat is fortunately one an American has never yet had to contemplate.

"PROGRESS" 34.

THE MILITARY EDUCATION OF ARMY OFFICERS.*

By Major WILLIAM MURRAY BLACK, U. S. A.,
Corps of Engineers.

WHEN the commission is attained, the officer has arrived at man's estate. Irresponsible school days are ended. The chosen career is entered upon and a return must now be made commensurate with the trust accepted. The young officer starts with a stock of text-book information which is to be forgotten and reacquired in the school of active life, full of enthusiasm, but with a very indefinite idea of his duties. He soon finds that his previous training, however good, was but a preparation, and in measures, as he understands his new position more fully, the more clearly he realizes how much he has yet to learn, and that if he would keep pace with his own best self, this learning must continue until his active service is ended.

On joining his command his first impressions and the first influences under which he is thrown have much to do with the manner in which he will regard his future responsibilities and duties. It is essential that the entire commissioned strength of the army shall be imbued with a proper spirit, and that each officer shall be found performing his full duty, doing, teaching and learning in accord with his grade and opportunities. To bring about this state of affairs should be the object of all in whose hands is committed the responsibility for the welfare of the army and so of the nation.

The training and education of the officer must be a part of the Army life. Schools of various degrees and kinds are only places where are given better opportunities for special training.

GERMANY.

In Germany there are eleven general war schools, with courses of from eight to nine months each; also special technical schools for the Engineers, for field Artillery, for foot Artillery, for Infantry instruction (at Potsdam), for musketry

*Continued from January Number.

instruction, for riding, for veterinaries, and for telegraphy and ballooning; and finally there is the great War Academy at Berlin, where the three years' course is made the means of instructing and selecting line officers of not less than three years' service for provisional appointment in the General Staff. In addition to these, in the last ten or fifteen years sixteen immense areas have been acquired for camps of instruction, and equipped with buildings and accessories, at a cost of nearly $22,000,000. Each camp makes provision for an Army Corps.

As already stated, all officers of the German Army pass through the War Schools, with but few exceptions, before receiving the full commission. The exceptions are (*a*) young men who have studied for one year at a University or certain high class technical schools (it will be remembered that the official "Arbiturienten" examination must have been passed before entrance to a University); (*b*) cadets of the "selecta" class; (*c*) officers of the reserve transferred to the active army.

The course covers nine or ten months, and is divided into four terms, three of which are devoted to theoretical instruction and one (six weeks) to practical exercises. The program of instruction is as follows: (1) Tactics, theoretical and practical, formal (drill-ground work) and applied, including exercises in Kriegsspiel; (2) Science of Arms, including ordnance and gunnery, theoretical and practical, with visits of inspection to technical establishments and target ranges for small arms and great guns; (3) Fortification, field and permanent, theoretical and practical, with visits of inspection; (4) Study of Terrain; (5) Topographical Drawing, including careful and hasty surveying; (6) Army organization and military law; (7) Foreign languages, French thoroughly, and Russian to an elementary degree; (8) Military Correspondence; (9) Regulations and Duties, including hippology; (10) Special Instruction for aspirants for artillery and pioneers; (11) Drills and exercises, including exercises in command and in instruction; (12) Musketry instruction; (13) Gymnastics, fencing and swimming; (14) Riding; (15) Visits of inspection.

Ensigns of foot Artillery and Engineers who have passed the officer's examination must serve about twenty-one months with troops and also pass successfully through the combined Artillery and Engineer School, at Berlin, as supernumerary

officers, before they receive the full commission as second lieutenants.

Students of the War Academy are selected. The selections are made annually, on recommendation of the directorate of the War Academy, from a list of applicants from the entire army who possess certain requisites, including capacity for theoretical and practical work, intellectual competency, love of work, a good physique, proper training prior to entrance into the service, etc., and who have passed a stringent written examination in subjects prescribed by the War Academy. The best of the papers, including personal and efficiency reports, to the number of two hundred, are selected for final examination. From these about 134 students (the limit of capacity for one class at the school) are entered for the lowest class.

The curriculum of the War Academy follows on page 212.

While this course of instruction is based on knowledge acquired earlier at the cadet schools, war schools, technical military schools, and the gymnasia, it is not a mere repetition of their courses. The course aims at a higher training, developed independently and free from all scholastic restraint, in order to fit the officer for any service war may require of him. Instruction is given by lectures, with exercises in the application to particular cases of the general knowledge acquired. Purely military lectures are illustrated by practical examples, the details of which are given in plans or maps. Student officers are encouraged to deliver addresses from time to time on military subjects, developed by original investigations. Before delivery such addresses are submitted to and examined by the instructors, who are thus enabled to guide and coöperate with the authors and to point out erroneous propositions.

During the course, the student officers, under the conduct of the respective instructors, visit different military workshops, technical institutes, military drill grounds, and fortifications in the vicinity of Berlin. They also witness the exercises of the Railway Brigade, and have a trial and instruction trip on the military railway. Each year, immediately after the conclusion of the lectures, the highest class is taken, mounted, on a practice tour, similar to the general staff tours.

In this tour the first few days are spent in combining exercises in field sketching with examinations of the country from

TABULAR STATEMENT SHOWING THE APPORTIONMENT OF THE DIFFERENT STUDIES AMONG THE SEVERAL CLASSES.

CLASS I. HOURS WEEKLY.		CLASS II. HOURS WEEKLY.		CLASS III. HOURS WEEKLY.	
1. Tactics	4	1. Tactics	4	1. Tactics	2
2. Military History	3	2. Military history	4	2. Military History	4
3. Fortifications	3	3. Science of Arms	2	3. Duties of the General Staff	4
4. Military Law	1	4. Means of Communication	2	4. Siege War	2
5. History	4	5. Military Surveying	2	5. Municipal and international law, state administration	2
6. Mathematics	4 } or	6. Topographical drawing	2	6. Marine Warfare	1
7. Physics	4 }	7. History	4	7. Mathematics	3 } or
8. Physical Geography	2 }	8. Mathematics	4 } or	8. Geodesy	3 }
9. General Geography	4 &	9. Chemistry	3 }	9. French	6 or
10. French	6 or	10. Military Hygiene	1 &	10. Russian	6 or
11. Russian	6 or	11. French	6 or	11. Polish	6
12. Polish	6	12. Russian	6 or		21
	25	13. Polish	6		
			25		
The choice here lies between the mathematical course (6, 7 & 8) on the one hand, and general geography and one of the languages on the other.		The choice here lies between the mathematical course (8 and 9) and one of the languages. (Also, two hours required in topographical drawing, in which case military hygiene is omitted.)		The choice here lies between the mathematical course (7 & 8) and one of the languages.	

tactical points of view. Later the physical qualities and endurance of the officers are tested by a gradual increase of the work required. Practical problems are set in which two armies, each composed of the various arms and of about the size of one Infantry division, are supposed to be opposed. All the necessary orders for movements are drawn up, and finally the tactical dispositions are discussed and criticised.

Transfers from class to class are made annually, depending on the results of examinations and on the student officer's deportment on and off duty. Between July 1 and October 1 lectures are suspended and student officers are temporarily attached to regiments in their own corps of arms of the service different from their own.

After the final examination the student officers return to their regiments, and each receives a diploma in which is set forth the proficiency attained. The Director of the academy also makes a private report in each case as to the fitness for detail in the General Staff, or for other of the higher staff duties.

The relative value of the means of training afforded and the inducements for enthusiastic professional work offered by Germany to her officers are well stated in the following extracts from General Ludlow's report:

"While ample provision is made for theoretical and incidental instruction by as thorough and practical means as possible, the school of instruction that is regarded as possessing the greatest value, both for officers and men, is that of actual service, and no pains or labor is spared to make this effective. The two years spent with the colors are for the men a period of unintermitted industry, which leaves little of their waking hours unoccupied. Between drills, exercises, gymnastics, practice marches, schools, and the daily work of the garrison, guards, police, etc., there are few hours of leisure, and the men live as plainly and labor as industriously as do their fellow citizens at home who are engaged in earning their living. It is the theory of the German training that the men should not find the military service one of idleness or self-indulgence, and be thereby unfitted for the return to industrial pursuits that awaits them after the expiration of their active training. The object, on the contrary, is to develop and improve their capacity, both physical and mental, so that they shall not only be fit for summary transfer to the requirements of field service, but will return to their families capable of more and better work than if they had remained at home.

"The training is the same as to the officers, who are expected to keep themselves, physically and otherwise, in condition to take the field at any hour and endure the fatigues and exigencies of actual warfare without danger of failure or undue sense of hardship. The annual manuevers are of the greatest value in this respect, testing both capacity and endurance, involving every contingency

of war except bloodshed, and weeding out every year all who fail to reach the standard of satisfactoriness."

* * * * * * * * * * * *

"In the gradual advancement of officers to higher grades, the general principle of promotion by seniority is followed, each step being subjected to careful determination of competency and fitness for the higher rank and responsibility. An officer superseded by his junior has no alternative but to withdraw from the service. When his term for promotion arrives, if the carefully considered decision of his superiors is adverse to the expediency of his advancement, he is so informed, and thereupon asks retirement or leaves the active service for employment in the Reserve, the Landwehr, or in civil administration. The decision as to the individual officer is mainly based upon his official and private records of service, which are annually submitted in full and explicit detail by regimental and higher commanders. These go to the Military Cabinet and are laid before the Emperor, who in all cases determines as to matters of promotion and assignment.

"An exception to the rule of promotion by seniority is made in the case of officers who, after a period of several years' service with troops have taken the advance course at the War Academy at Berlin, conducted by the Great General Staff, and have approved themselves as qualified for service in the General Staff. These, constituting the elite of the service, get their captaincies two or three years in advance of their contemporaries, and gain another two or three years in reaching majorities. Above the grade of major, however, the rule of seniority is again observed.

"In order to give a certain measure of elasticity to the service and provide for the employment of specially capable officers, without impairing the seniority principle, the German practice recognizes a distinction between lineal rank and command rank. For example, a colonel may be assigned to command a brigade, but cannot be given the rank of that command, viz.: major general, because colonels senior to him have not yet been promoted. Accordingly, as colonel commandant of the brigade, he receives certain additional allowances, which practically give him the pay of the higher rank, though not yet attaining the actual commission. So with other grades."

FRANCE.

Students of the French École Supérieure de Guerre are selected after a competitive examination from applicants from among Captains and Lieutenants of the entire army. Little information of late date is available concerning the system and results of instruction, though it is reported that relatively more attention is paid to practical instruction of the student officers than in the German War Academy. As mentioned earlier, the French maintain also technical schools for instruction in the special arms of the service.

Promotion from grade to grade in the French army is made as shown in the following table:

RANK		Qualifying service necessary	Whether by seniority or Selection	REMARKS
From	To			
Sub-Lieutenant	Sub-Lieutenant		Selection	Promotion is by arms, not regimental.
	Lieutenant	2 years	Seniority	
Lieutenant	Captain	2 years	⅓ Selection ⅔ Seniority	
Captain	Major	4 years	½ Selection ½ Seniority	
Major	Lieut.-Colonel	3 years	Selection	
Lieut.-Colonel	Colonel	2 years	Selection	
Colonel	Major-General	3 years	Selection	
Major-General	Lieut.-General		Selection	

ENGLAND.

*In England the schools for the training of officers are the School of Military Engineering at Chatham, the Artillery College at Woolwich, the School of Gunnery at Shoeburyness, the Musketry School at Hythe, School of Signalling at Aldershot, the Army Medical School at Netley, the Veterinary School at Aldershot, the School for Yeomanry and Volunteer Cavalry at Aldershot, and the Staff College at Camberly, Surrey.

In addition, gymnasia are established at all large garrisons, under the charge of officers who are graduates of the gymnastic courses at Aldershot.

Camps of instruction for all arms are established at Aldershot, Shorncliffe, and Strensall Common in England, and the Curragh, in Ireland.

Artillery practice camps for field artillery are established at Okehampton and Morecambe Bay, England, and at Glenbeigh, Ireland; for mountain artillery at Hay; for siege Artillery at Lydd; and for seacoast Artillery at the Isle of Wight.

In the School of Military Engineering at Chatham, instruction is given under three heads: (*a*) Officers of the Royal Engineers; (*b*) Enlisted men, Royal Engineers; (*c*) Special courses for officers, non-commissioned officers and men of Cavalry and Infantry of the regular army and of militia and Volunteer engineers.

All officers of the Royal Engineers are sent to Chatham, on

*The detailed information relating to the English officers' schools is taken mainly from "The Army Book for the British Empire."

receipt of the first commission, for training in engineering and general military duties. The course is of two years, divided into two parts, the first of which must be completed before an officer leaves the school. The second portion, embracing the higher branches, may be completed before the officer is sent elsewhere, or may be postponed for two or three years.

The course consists of theoretical and practical instruction in military duties and administration, military law, fortification, construction, civil engineering, sanitation, surveying, reconnaissance and astronomy, military history and tactics, electricity, chemistry, photography, manual training in trades, and shop-work and musketry. An advanced course is also given for senior officers, who are encouraged to return to the school to refresh their knowledge.

The courses for officers of Infantry and Cavalry are much shorter, and comprise only those portions of military engineering subjects which are of practical value in field service to officers of those arms. The Artillery College gives the higher training in artillery service, and is used also by the Royal Navy and by other departments. Its graduates are entitled to place the letters P. A. C. after their names in army and regimental lists.

The Staff College at Camberly, Surrey, is for the higher education of officers, to qualify them for the staff of the Army. An officer desiring to enter the staff college must be recommended by his regimental or battalion commander, must have had not less than five years service, must have approved himself a good regimental officer, and have certain other requisites. Entrance is obtained by competitive examinations, a certain standard of mathematics, French, or German, fortifications, military topography and tactics being obligatory. The course of instruction at the college is described as severe and comprehensive, theoretically and practically, in all military subjects, modern languages, natural sciences and riding.

Tours of inspection of other military schools are made, and practical field problems of attack and defense are given. After graduation each officer is given an opportunity for service with the different arms, and is entitled to have the letters P. S. C. placed after his name on Army lists.

The facilities given for the school training of officers in the British service seem to be ample, but complaint is made that no adequate reward is given to the industrious officer. It is

stated, for example, that when appointments for special service in the South-African War were made, apparently no particular weight was given by the War Office to the diplomas of the Staff College.

In discussing the defects of the British military service, and a reported lack of enthusiasm in professional work on the part of officers, the Parliamentary Report states:

"Several causes appear to have combined to bring about this state of things, the gravity of which cannot be exaggerated. From the evidence laid before them, the Committee are driven to conclude that the dominant cause is that the promotion of the young officer is not dependent on the zeal and ability which he may show.

"Under a proper system, keen, hard-working, and capable officers would receive more rapid advancement than those who contented themselves with doing only as much as was necessary to escape the censure of their superiors. Under the existing system the promotion of indolent officers is as rapid as—and may be more rapid than—that of their more industrious comrades, a fact which is a sufficient explanation of the lack of zeal and the absence of a desire for self-improvement of which so many witnesses * * * * complain.

"Another cause, only second in importance to the above, of the want of efficiency of the young officer in professional matters, lies in the difficulties which the present organization of the Army throws in the way of the effective and practical training of both officers and men. * * *

"It is unnecessary to insist that only continual practice in the field and in the actual handling of troops can enable the officer to acquire that professional skill which he ought to possess. It is only by practice in the field that the officer can learn how best to take advantage of the accidents of ground, or how troops should be actually disposed to attain a desired result; in short, it is only by continual practice that the officer can learn to handle the weapon with which he has been entrusted, namely, the unit under his command, be it a regiment, battery, battalion, squadron, or company, in the field, and in the field alone can he learn both its capabilties and its limitations. * * *

"Another factor which militates against the military efficiency of the young officer, more especially the young officer of infantry, is the manner in which he is kept, as it were, in leading strings from the start, and is not entrusted with any real responsibility. On the other hand, he may be, while entirely ignorant of the details of interior economy, placed in sole charge of a company, in which capacity he must necessarily rely entirely on the advice and assistance of the senior non-commissioned officers themselves too frequently only young soldiers. Such a system is a fatal bar to the acquiring of a habit of promptly assuming the initiative and developing a readiness to accept responsibility. As one of the commanding officers quoted in the Appendix remarks, 'The habit of leaning on others, once acquired, is not easily shaken off.' The initial step in improving the military efficiency of the officer must consist in giving him a command, however small, for which he can be made really responsible."

On the subject of promotion examinations, the Committee say:

"In short, the existing promotion examinations are admitted 'to encourage the custom of idleness with a brief period of cram'. Moreover, all military witnesses are in favor of making these examinations, now almost entirely written and theoretical, more practical, so as to ascertain, not so much that the officer has read certain text-books, but that he is able to apply practically the knowledge thus obtained. Unless he is able to turn his knowledge to practical account, the mere accumulation in his brain of a store of facts and figures will be of little or no advantage to him. * * *

"It is useless to expect that the examinations, however much they may be improved in form, will have any real effect on the efficiency of the officer so long as the whole system is vitiated by the fact that it makes no difference to the subsequent career of the officer whether he passes with the highest possible distinction or merely succeeds in scraping through."

The Committee then give their scheme for promotion examinations, recommending that practical field tests be made of the knowledge and skill of the senior officers of each grade at any time during the drill season without more than one week's previous notice. In answering questions on military law, the candidates would be permitted to refer to official sources of information. In the military organization and equipment examinations, no questions involving a knowledge of minute detail should be set. Great importance is given to examinations in military history for all regimental officers below the grade of Lieutenant-Colonel, for which a special time annually would be set, the subject having been previously announced.

The Committee also recommend that special inducement, by increasing pay, be given to officers who are proficient in foreign languages, commensurate with the expense incurred in obtaining and maintaining such proficiency, tests to be made from time to time.

"In bringing their Report to a conclusion, the Committee desire to lay stress in the most emphatic manner upon the following points which they believe to be of vital importance to military education:

"First, they would observe that the various stages of Military Education, antecedent, intermediate, and subsequent, though in many respects separate and independent of each other, are in reality intimately connected and inter-dependent. For, given the best possible education, if the subsequent conditions of the training of the young officer be such as to discourage any intellectual interest, if the condition of things be such as is depicted by the late Adjutant-General and the present Military Secretary, it is obvious that the knowledge acquired for the entrance examination, and in the

intermediate course, has not much chance of being maintained or extended. Rather must it moulder and be lost through disuse. A man is not well educated because he has been successful in a competitive examination at the age of 18 or 20, however good the teaching he may have had, however reasonable the subjects in which he may have been instructed.

"In order to remedy this, it is obvious that not only should proper tests of individual efficiency be provided at proper times and with proper intervals, but that these tests should have a definite and proper effect upon advancement. It is useless to impose tests if they are to be conducted in an illusive and unpractical manner, or at the wrong time, or if they lead to no practical result. It is useless to expect a spirit of keenness for self-improvement in professional subjects if promotion be accorded to the slothful and unintelligent, if the diligent and quick-witted find that they gain nothing by those qualities, but are liable to be left behind in the race by those having the good fortune to possess connections and interest.

"The Committee wish most emphatically to repeat that the only chance of a general improvement in Military Education—and in the consequent efficiency of the Army—lies in an honest system of promotion by merit, following upon tests conducted in an honest and practical manner, honestly reported on, and duly acted upon by the authorities.

"So long as mediocrity is permitted to pass muster, and signal ability to meet with no substantial recognition, it is useless to hope for any valuable results from verbal amendments in the regulations. No examinations, however well planned, either of candidates before entry or of officers after joining, can of themselves make good officers. Nothing but inducements in the shape of certain reward for good work done either in peace or in war, on the staff or in the regiment, can raise the standard of knowledge throughout the commissioned ranks.

"The Committee would press most earnestly their recommendation that the military authorities should make the promotion of officers of all ranks depend on the ability and industry shown in professional work."

UNITED STATES.

In the United States the special service schools are the Engineer School of Application at Washington Barracks, D. C.; the Artillery School at Fort Monroe, Va.; the School of Submarine Defense at Fort Totten, N. Y.; the School of Application for Cavalry and Field Artillery at Fort Riley, Kansas, and the Army Medical School at Washington, D. C. For advanced instruction there are the General Service and Staff College at Fort Leavenworth, Kansas, and the War College at Washington, D. C. In addition, provision is made for post schools for officers. Under the scheme of instruction as adopted the theoretical instruction of the officers begins in these post schools.

No officer of the line of the Army is exempt from the work connected with the officers' school at any post excepting under such circumstances as would exempt him from any other duty. Post Commanders, under the supervision of the Department Commander, have immediate charge of such instruction. Systematic recitations are only required ordinarily from officers of the grade of 1st and 2nd Lieutenant, and Captains of less than ten years' service.

Graduates of the U. S. Military Academy, of the former Infantry and Cavalry School, of the Artillery School, or of the Engineer School are excused from recitations in certain branches, but at the close of the school term are required to qualify in these branches, as well as in the others. If, in the judgment of the Department Commander, any officer of any grade is in need of instruction, systematic recitations or qualification by examination may be required of him.

The annual period of theoretical instruction aggregates ninety school days between November 1st and April 30th. Two hours per day are to be devoted to recitations, exclusive of the time required for proper preparation. The course is to be completed in two years.

The prescribed course and the hours of recitation to be devoted to each subject are as follows:

ALLOTMENT OF TIME IN HOURS FOR RECITATION IN THE SEVERAL SUBJECTS

FIRST YEAR.

	OFFICERS OF			
	Cavalry.	Field Artillery.	Coast Artillery.	Inf.
Administration (complete)	35	35	35	35
Drill regulations (complete)	35	35	*a*20	35
Manual of guard duty (complete)	6	6	6	6
Small arms firing regulations (complete)	18	18	18	18
Minor tactics (partial)	15	15	15	15
Military law (partial)	15	15	15	15
Field engineering (partial)	15	15	..	15
Military topography and sketching (partial)	*b*15	15	15	15
International law (partial)	15	15	15	15
Hippology (partial)	11	11	11	11
Methods, materials and implements necessary to coast defense (partial)	..	..	30	..
Total	180	180	180	180

SECOND YEAR.

	OFFICERS OF			
	Cavalry.	Field Artillery.	Coast Artillery.	Inf.
General review of administration ..	5	5	5	5
General review of drill regulations..	5	5	5	5
General review of manual of guard duty	1	1	1	1
General review of small arms firing regulations	2	2	2	2
Troops in campaign (complete) ...	18	18	18	18
Completion of minor tactics	25	25	25	25
Completion of military law.....	25	25	25	25
Completion of field engineering....	25	25	..	25
Completion of military topography and sketching *b*	25	25	25	25
Completion of international law ...	25	25	25	25
Completion of hippology	24	24	14	24
Completion of methods, materials, and implements necessary to to coast defense.....	..	..	35	..
Total	180	180	180	180

a To include School of Battery. *b* Including practical work.

Instruction in administration is given by the study of the Army Regulations, amendatory Orders, and Circulars, and the manuals of the Quartermaster's, Subsistence, and Pay Departments. The remaining subjects are studied from prescribed text-books. Practical exercises are required where possible.

When necessary, additional elementary instruction is to be given, additional time being allotted thereto.

The Engineer School of Application at Washington Barracks, D. C., is established for the instruction of the junior officers of the Corps of Engineers, and for special instruction of such officers of other arms of the service as may be detailed. The school staff consists of the Commandant and three instructors, with the Adjutant of the school and post as secretary. One of the battalions of Engineers is also stationed at the post for aiding in the practical instruction of the junior officers, and also for instruction in their own special duties as Engineer soldiers.

The officers' course of the school is in fortification, field and permanent; military engineering, including reconnaissance, photography and map-making; the art of war; civil engineering, including surveying and astronomy, strength of

materials, elementary mechanical engineering, constructions; municipal engineering, including water supply and sanitation; improvement of rivers and harbors; laws relating to contracts and disbursements; business methods and records; electrics, generation, transmission and application of electric power, with reference to lighting, heating and propulsion, and the military uses of electricity; ordnance and armor, including the Artillery use of fortifications, warships, guns and mortars, projectiles and explosives. The course covers two years. From November 1st to April 30th of each year the work of the student officers is mainly theoretical. During the remainder of each year practical field work is carried on with and without the aid of the battalion. The student officers are attached to the companies, and take part in all field instruction in Engineer and Infantry work.

The theoretical instruction is gained by reading, lectures, and the preparation of theses, with practical exercises in the use of the various instruments and apparatus. Student officers are required to be at the Academic Building from 9 to 12.30 and from 1.30 to 4 on each week day except Saturday, when work is suspended at 12 M. Visits are made to works of military and civil engineering, manufacturing establishments, etc. Examinations are held from time to time, and on completion of the course the student officers are rated as proficient with honor, proficient, or deficient.

All Artillery officers receive advanced instruction in their arm at the Artillery School at Fort Monroe. The School Board consists of the Commandant, four instructors, one assistant instructor, and the Adjutant, who is, ex-officio, secretary. Eight companies of Coast Artillery form the garrison of the Fort, and are used in the practical instruction of officers as required.

The school term is of eleven months, in which the course is completed. It covers ballistics, and sea-coast engineering; electricity, mines and mechanism; artillery, coast defense, chemistry and explosives; such special courses, including customs of the service, usages, property returns, correspondence, army regulations, etc., as may be prescribed.

The method of instruction prescribed is the same as that given for the Engineer School. Officers found proficient in any part of the course by a preliminary examination are excused from study in those subjects, and take, instead, some

other subject, for the study of which the school offers facilities. Certificates of proficiency are given to officers finishing the course satisfactorily.

The School of Submarine Defense at Fort Totten instructs a number of officers of all arms, principally Artillery, in electrics and the use of submarine mines. The course is for one year and covers electricity, mines and mechanism ; chemistry and explosives; and selected special subjects.

The School of Application for Cavalry and Field Artillery is established for instruction in drill and practice in field duties and combined operations for Cavalry and Field Artillery. Theoretical instruction is only given as prescribed for all army posts. The officers under instruction are those on duty with the commands of Cavalry and Field Artillery respectively. In addition to the ordinary Cavalry and Artillery drills, practice is had in the service of security and information, elementary field engineering, etc.

The Army Medical School at Washington gives a five-months' course to junior medical officers of the Army, combining theoretical instruction with hospital practice.

The General Service and Staff College at Fort Leavenworth, Kansas, is intended to be a school of instruction for all arms of the service, to which shall be sent officers, preferably of the grade of Lieutenant, who have been recommended for proficiency attained in the officers' schools conducted at the various posts. The permanent garrison will consist of a battalion of engineers, a squadron of cavalry, three batteries of field artillery, and a regiment of infantry, with details from the signal and hospital corps. The course for the present will be covered in one year. There are four departments: tactics, comprising grand and minor tactics, army organization, hippology, equitation, musketry, strategy and drill regulations; engineering, comprising military topography and sketching, field fortification and field engineering; law, including military administration; military sanitation and hygiene.

The instruction is by recitations from text-books and by lectures, with practical exercises with and without troops. Written examinations are held semi-annually, and the papers submitted are graded from 0 (failure) to 3 (maximum). The student officers are listed according to merit determined from these marks, and from marks given for practical exercises

held during the term. For record at the War Department and at the College, the class upon graduation is arranged in order of merit (special proficiency in any subject being noted), the maximum values assigned to the different departments in ascertaining the figure of merit being: tactical, 350; engineering, 300; law, 100; hygiene, 50. For publication of standing, the class is arranged alphabetically in two grades: 1. Distinguished; 2. Proficient. Selected officers graduating in the Distinguished grade, not to exceed five, have the words "honor graduate" affixed to their names in the *Army Register*.

The Staff College will also instruct officers of the National Guard, ex-officers of Volunteers and graduates of military schools and colleges.

The War College has been but partly organized. Its object is to give to selected officers an advanced course of professional study. Officers eligible will be (*a*) those who have been recommended as distinguished graduates of the General Service and Staff College, and (*b*) such field officers and Captains as may be specially designated by the War Department for instruction.

This college also has general supervision of all of the different army schools, and is charged with the duty of maintaining through them a complete system of military education, in which each separate school shall perform its proper part.

The War College is under the immediate direction of a board of five officers, detailed from the Army at large, and the following ex-officio members: the Chief of Engineers, the Chief of Artillery, the Superintendent of the United States Military Academy, the Commanding Officer of the General Service and Staff College.

CONCLUSIONS.

From the foregoing it is evident that experience in all of the leading nations of the world has shown (*a*) that definite and continuous instruction for officers is required under the conditions of to-day; (*b*) that this instruction is in the nature of training to better prepare officers for their duties in war; (*c*) that the training should begin and be continuous as a part of the duty with troops in garrison and in the field, and should be largely in the form of practical exercises, with and without troops, with extended military maneuvers from

time to time; (*d*) that each junior officer after a period of service with troops should receive a short training at a technical school for his own arm, training at all of the schools being very nearly the same in general studies in the Art of War; (*e*) that officers selected for their practical ability and physical fitness should receive a higher training at a War College, to fit them for the higher staff duties; (*f*) that to provide the requisite incentive to work, a system of rewards and punishments is necessary.

There is great unanimity in theory as to the nature of the instruction required, but only in Germany and France is this theory carried out fully in practice.

In the United States there has been, prior to the past year, an almost total neglect of any general field exercises in time of peace. It is also noticeable that in the United States alone is little attention paid to the necessity for officers speaking some language in addition to the mother tongue. The prevailing deficiency in this respect was of less moment before the United States became a world power, though even then it was often a source of embarrassment. To-day a speaking knowledge of Spanish is of great importance to officers serving in Porto Rico and the Philippines, and as the interests of the United States extend, and through this extension, service with or against troops of European nations becomes more frequent, the importance of a familiarity with French and German, at least, increases. All of this is in addition to the standard of culture and the training of the mind which such familiarity shows. Graduates of West Point have learned to read French and Spanish with comparative ease. It is all the more discreditable that this knowledge should not be carried a little further after graduation.

Another feature of the essential training is the habit of readily taking responsibility and of self reliance. Here, again, our practice is faulty. With a small army and mistaken ideas of economy, in time of peace almost all questions, financial and administrative, are now settled at the War Department. Little power is given to a department commander, and less to a post commander; correspondingly little is demanded of either. The result is that war finds the senior officers without experience in the independent handling of affairs of magnitude, involving quick decisions and large outlays. Similarly, company officers find themselves restricted by printed rules in

all directions and without much chance of self-development. The officers of the Corps of Engineers alone, under conditions of peace, find in the civil works entrusted to their charge a field which imposes responsibility at an early age and requires the full exercise of their talents for organization, administration and execution. In former days the best of practice for juniors was found in the Indian campaigns, and of late the Philippines have offered opportunities for men to test themselves. Happily for the highest good, these last opportunities are past or passing. The habit of self-help must be acquired through other means.

Another unfortunate feature of the United States service is the volume of paper work and of useless signing of names now required; a volume of work so great that post commanders and post staff officers find themselves chained to their desks during time which should be devoted to the supervision of the active work for which they are responsible, and this with the irritating consciousness that a large part of the time thus consumed is used to no useful ends; that the system, paper perfect though it may be, does not adequately safeguard public interests in time of peace and falls through its own weight in time of war. It is partly on account of this that practical field exercises do not form their due proportion of the garrison life.

Any general project for the instruction of officers in the United States Army is made complex by the varying preliminary training of the officers, due to the different standards of requirements for eligibility to a commission, as previously described. Its execution is made difficult by the absence of an adequate legal system of rewards and punishments.

Methods to be followed in the Army must differ from those of a University. In the latter case practically it is sufficient for the faculty to offer to students the means of instruction. In the service schools, responsible officers are required not only to afford the necessary facilities, but also at the end of a given time to turn out a body of instructed men. In the University idle students can be expelled. In the service schools, the commissions of the students which provide their means of support are assured, and so long as no overt act which would lead to a court-martial is committed, no adequate punishment is possible. Similarly, the tangible rewards for hard work are a recommendation which possibly

may lead to future advantages, and the right of having certain words placed after the name in the *Army Register.*

While some officers will do their best under any conditions, others will not. It is unfair to the capable and industrious that they should not receive immediate substantial recognition for good work. It is also harmful to the service that it should be in the power of any one, by indifference or idleness, to lower standards of instruction, to make necessary general methods required only for the indifferent, and by example to detract from the spirit of professional enthusiasm and energy which in these days is necessary to the Army.

Is not this one of the reasons why in the post schools a fixed number of hours of recitation is required from all, from the partly instructed as from the ignorant, from the mentally alert as from the sluggish-minded, to an extent which renders work on other lines nearly impossible?

In this connection the following extract from the Parliamentary Report is of interest:

"In making the recommendations embodied in this report, the Committee have not overlooked the fact that it is not desirable to attempt to compel officers to labor all day long and without intermission at the study of their profession. Any such attempt would be foredoomed to failure. They would rather offer adequate inducements in the form of rewards which can only be gained by the diligent, believing that in this manner more satisfactory results will be obtained than by any system based on compulsion. All officers must be shown that it is necessary to make themselves efficient in the discharge of their duties, and those officers who are not content with mere efficiency, but who, by application and study, acquire a mastery of their profession, should be rewarded by accelerated promotion. For the fact must be faced that the military profession has not been hitherto associated with protracted periods of hard work, nor are habits of industry to be acquired in a day. Moreover, seeing that the rewards are few, and consequently out of the reach of the majority, it is all the more essential that they should be given to the most deserving."

The War College Board has but recently been entrusted with the duty of supervising the work of education in the Army, and has not yet had an opportunity to coördinate the work of the schools. At present the task is made difficult by the recent increase in the number of commissioned officers of the Army, which had to be effected by bringing into the service a large body of partly trained or untrained men. The post-school course and the courses of the Artillery School and Staff College have been most affected by this.

The post-school system as at present organized is an experiment, and a part at least of the course as prescribed is of doubtful value, in that it would seem to contemplate loading the mind with a mass of detailed regulations, which are difficult to remember, and for which each officer has his manual at hand, taking time which, if not needed for instruction of and exercises with troops, can be applied advantageously to other professional studies, and to the solution of practical problems by one of the forms of war game. This system, untried abroad, apparently is intended to take the place of the lowest service school (the War School of Germany). From this we have the anomaly of a one-year's course at the Staff College fitting an officer for detail at the War College, while the two-years' course at the Engineer School or that of the Artillery School and School of Submarine Defense, combined, do not.

What can be done, practically, to better the training of our officers? Without doubt the curricula of all of the Army schools within a few years will be modified as experience may show desirable, and the educational system will be made symmetrical. In the instruction of men it should be assumed that the requisite mental training has been acquired already; therefore such instruction should be directed exclusively to the increase of a fund of useful information. As a rule, men cannot remember details of methods and figures beyond those in daily use. Any attempt to load the memory to a greater extent with such details results in waste of time and energy. A general knowledge of methods and facts can be retained and should be acquired, together with such memoranda as are needed to show where specific detailed information can be obtained when needed.

There remains to be had such action as may be required to impose on each officer responsibilities commensurate with his rank, and as nearly as possible commensurate with the duties devolving on that rank in time of war; to reform completely the system of paper work and to simplify it until it can compare favorably with the systems under which the great commercial enterprises of the world are conducted; and, finally, to provide a system of rewards and punishments.

This last is the most difficult. Something can be done without legislation. With advantage and economy to the United States, deserving officers can be sent on tours of

inspection through this country and abroad to observe how others do the class of work entrusted to them, or to afford opportunity for acquiring foreign languages, and promotion for juniors can be made more dependent on the record each officer makes at his service school.

But the German practice of promoting only capable officers and of retiring an officer who has been jumped by his junior is, after all, the most efficacious plan. In our own country measures looking to promotion by selection have always been regarded by the mass of the army with grave distrust. This is partly because political influence has seemed too powerful where the law gave any loop-hole, and because, disregarding political influences, the highest authorities are civilians holding office but a few years, necessarily unacquainted with more than a very few officers, and free from all official responsibility when the term of office has ceased.

Examinations for promotion were adopted as a means of compelling officers to study, but, as now conducted in the United States Army, only too frequently they simply promote the "custom of idleness with a brief period of cram" complained of in England. As a means of weeding out useless officers, they are a failure. As a means of proving the efficiency of an officer, they are equally a failure. No mental examination yet devised will show more than that an officer has acquired a certain fund of information, and, as a rule, time and means are too limited to prove by field exercises, under the examiner, practical ability. Neither can an examination prove habits of industry or professional zeal. The examination should be, in fact, a time for making a summation of the daily record made by each officer, with such general theoretical and practical exercises as may be desirable to make the Board acquainted with the real man.

Under these circumstances it has seemed best to the Navy to bring about the same ends by an honorable retirement of any faithful officer whose term of usefulness has passed, it being found that Boards of Officers will so act, when they hesitate to punish a brother officer to the extent that the laws governing promotion in the Army demand.

In this connection attention is invited to the method of reward for especially distinguished service now in use in the United States service, which would require legislative action for modification. Inasmuch as all promotions to the grade of

Colonel must be by seniority, when for especially meritorious work it becomes desirable to give increased rank to an officer, nothing can be done excepting to appoint him a General Officer. Opportunities for such service are not given to all. Through no fault of his own, a capable and energetic officer may be held by his duties far from the sphere of opportunity. He then finds that the soldierly performance of such obscure duty, which is generally unsought for and disliked, results in his junior being promoted to one of the few positions of General Officer, lessening by so much his chances of ever obtaining the star to which he has looked forward as the public recognition for himself and his family, of duty long well performed—as the final culmination of his active career. In other words, the United States chooses to reward especially meritorious service in its own behalf at the expense in reputation and in pocket of its own servants. This is economical for the Government, but scarcely dignified. Why cannot such recognition be given by creating an extra place, with command-rank and full pay? In this way the reward would come as it should, at the expense of the beneficiary, the United States. This course not only would be more dignified for the United States, but also it would prevent the loss of efficiency which always results when capable and conscientious officers find themselves overslaughed by juniors.

OUR MILITARY JUDICIAL SYSTEM.

By Colonel EDWARD HUNTER, Judge Advocate, U. S. A.

UNIUS tells us that "as a practical profession the study of the law requires but a moderate portion of abilities." This used to be true of the study of military law. But the subtlety of those chosen to expound it has made great sagacity necessary to the successful investigation of many of its questions, so that military men are now quite willing to take this branch of the law upon trust, for they see mystery in it which only a Judge Advocate can satisfactorily explain.

This distrust of their judgment and surrender of their right to think for themselves has been opportunity for those who would make an occult science of a species of knowledge in which the gentlemen of the army formerly were proficient. The condition to-day is that the study of the law military is neglected and practically unknown by all but the specialist in law craft. But as every officer is presumed to be interested in the welfare of the community to which he belongs it is incumbent upon him to be acquainted with that law which has for its principal object the maintenance of good order and discipline in the military community, and according to whose provisions he may be called upon to administer justice.

For a long period in the history of our army the treatise on military law of Captain De Hart satisfied its most pressing needs. His work was first published in 1846 and was well adapted to meet a peculiar want of our service; for up to that date the works relied upon as guides for the administration of military justice were the productions of a foreign country and intended for the government or direction of foreign military bodies. De Hart may be said to be our primary authority upon the subject of American military law. He was a Captain of Artillery and employed for a considerable space of time in the capacity of an Acting Judge Advocate of the Army. His excellent institutional treatise was especially serviceable, and will long remain a monument to his accurate learning and industry.

The author who next appeared in the field of American military law and long retained a place of great weight and authority was Captain Benét of the Ordnance Department, U. S. Army. His work was first published in 1862 and went through several editions.

Decisions, issued from the War Department, of disputed and doubtful points in the practice of military tribunals, and the opinions of the Attorneys General on points of law requiring legal interpretation, suggested to this author the preparation of a work in which these decisions and opinions might be embodied and made accessible to the army at large. This publication appeared at a very critical time of our history, when we had just entered upon a war for the preservation of the Union, and it proved to be "a useful link in the chain of our military jurisprudence." From September, 1862, to December, 1875, Major General Joseph Holt, a great lawyer, was Judge Advocate General of the Army. During his incumbency many able decisions issued from the War Department on points of law requiring legal interpretation which had for their basis the opinions given to that Department by this distinguished lawyer. Judge Holt, more than any other American, enlarged our knowledge of military jurisprudence, and to this day his opinions are received as evidence of the law military in the United States.

Opinons emanating from the office of the Judge Advocate General of the Army must ever depend, for their weight and authority, not alone upon the fact that they have been approved by a Secretary of War, but also upon the independence and repute of the incumbent. If he has no greater spirit than to give just such advice as his superiors seek or demand his opinions will not long be consulted or respected, and if he would serve the country at large he must, in his opinions, declare his real sentiments as to what the law is, even though they may be in direct opposition to the views of his superior. Judge Holt in rendering his opinions upon questions of law arising in the business of the War Department appears to have always acted that open, independent part which became his profession, rank and station. Lesser lights have followed General Holt in the office he adorned and their opinions have been edited and published, but in the army, even to this day, the name of Holt carries authority with it.

Judge Advocates General have not always truly declared

the law. In was under the advice of one of these gentlemen that it was held that officers of the regular army might lawfully try the officers of the volunteer force (Cir. 21 H. Q.A., June 30, 1898). A United States Circuit Court of Appeals commenting upon this advice, and the action taken under it, remarks as follows: "But the opinions of the officers of the executive department of a government relative to the construction of a statute whose execution has been entrusted to them justly command and should receive the careful consideration of the courts, and in doubtful cases they should be permitted to lead the way to their decisions. Their opinions ought not to be overruled or disregarded unless upon a deliberate and careful review of the decisions which they render it clearly appears that they are tainted with error." (P. C. Deming vs. R. W. McCloughry.)

This dictum is in line with what was published to the army in 1881, viz.: "A misapprehension existing as to the legal force to be given the opinions contained in the 'Digest of Opinions of the Judge Advocate General' recently published by authority of the Secretary of War, makes it necessary to announce to the army and all concerned that the authority of the War Department was simply permissory for publication, and did not include an approval of all the Digest contained." * * * (G. O. 3, H. Q. A. A. G. O., Washington, January 5, 1881.)

The justness of the preceding representations is clear beyond the reach of doubt, and it seems needless to add that the student of military law should be careful to distinguish between somebody's opinions of what the law is and the decision of a competent court as to its legal meaning, and that he should eschew treatises upon the subject of military law whose text depends for its authority upon opinions which have no legal force.

No honest writer upon the subject of the evolution of American military law can properly omit to make some mention of the service done to the Army by the late Colonel Winthrop of the Judge Advocate General's Department, whose treatise upon military law is a monument to his industry and learning. Like a skilful painter he has carefully filled up his canvas with principles, facts and precedents, and has signally aided the military administration of justice.

If the laborious treatise of Winthrop is to retain the prime virtue of fullness, accuracy and authority, a new edition will

soon be necessary, and, opportunely edited, his text will probably for a long time retain its place as a standard in our military jurisprudence.

Let us turn from our law writers to the principal subject-matter of their commentaries. To leave to the civil power to deal with the offenses of soldiers would be either impossible or hazardous to discipline. It is for this reason that special powers have been given to the military authorities to enable them to govern the soldier in peace and in war, at all times, and in all places. We call the rule of this control of the military power over the actions of soldiers "Military Law," and it is, in general, a system of positive commands directing the conduct of soldiers, and persons who are from circumstances under the same law as soldiers.

The power of the State is as apparent in this branch of the law as it is in that for the civilian. In either case its obligations are enforced by the State or governing power whose commands it may be said to be. The courts in which this law is administered differ essentially, and necessarily so, from those of the civil power. The latter have their judges to decide on points of law and evidence and juries taken promiscuously from the mass of the people to decide on the facts. In the military community this separate institution of judge and jury could not long exist. And it does not require any experimenting with it to determine that it is unfitted for practical military use and that the members of a military court must, of necessity, be judges of both law and fact.

But does our military jurisprudence, as it exists to-day, conform to the growth of our country and its army? I think if any greater liberality were introduced into it military discipline and the service would be injured by it. The old and experienced officers are fast being eliminated. The present army has in it but few, if any, martinets. The leaven of West Point and Civil War training is inconsiderable; policy and safety, therefore, do not appear to favor any principle of relaxation or letting in, for the present, any more liberal spirit. The modernization of our army is an argument against, rather than for, any accommodation of our military law and precedents to the variable spirit of the times or of popular opinion. New appointees to the service, rapid promotion of those already in, the slight estimation in which observation and experience are now held, are reasons, not for making discipline liberal

and easy, but for maintaining a high standard of honor and strict regulations. Whatever of strictness is to be found in our particular jurisprudence, its introduction was due to the necessity of discipline.

But it does not necessarily follow that discipline would be impaired by a relaxation, in some instances, of the penalties which this law inflicts. Although punishment is one of the means by which discipline is enforced, its severity should depend upon the necessities of the body it helps to govern. If this necessity requires that every soldier who abandons the service in time of peace, or who purloins from a comrade a jackknife, should be driven out with ignominy and imprisoned, no one can justly complain of the severity of the penalty the law attaches to his act. But if we are employing such means as are greatly disproportionate to their end in order to check the progress of some very prevalent offense, the penalties of our law deserve to be relaxed. I cannot here enter into any minute inquiries concerning the effectual measure of military punishment, but must pass on to the discussion of the institution appointed to administer military law—the court-martial.

I do not think it savors of arrogance to say that the interest, safety, reputation, and honor of the Army depend, to a notable extent, upon the judgments of its courts-martial. It is the military institution most frequently and severely criticised. It has recently been said of a court-martial that "with the most convincing proofs of a brother officer offending before them they have decreed a punishment totally inadequate, probably with a view of showing their professional contempt for popular clamor." Is it fair to condemn our entire judicial system because a few of its courts have been partial? May we not, with equal reason, condemn it on the ground that it is of English cast?

I need scarcely observe that the whole matter of the cases criticised was a military question to be determined by a military tribunal, and if there was any miscarriage of justice the court that tried the case, and not our judicial system, is responsible for it. The judgments of our courts-martial have often been upheld, after argument, by the constituted tribunals of the country. And we are indebted to these tribunals for the improvement and development of our military law. I do not consider it a good reason for altering our whole system of

military law because a particular court has differed from the public in a particular opinion.

Another criticism of the court-martial is that its members are ignorant of the rules of evidence. I question if there are in the army to-day many experienced officers who cannot name the four cardinal rules of evidence. I would not have it understood that I believe these officers know all the law of evidence. They are, however, sufficiently versed in this branch of the law to prevent the counsel for the prisoner embarrassing them in their proceedings by exceptions against evidence and to consider evidence according to natural justice as agreeable to the genius of military law.

There are in the army to-day young officers who are very young men. That they may acquire a competent knowledge of military law, of the orders and regulations founded thereon, and of the practice of military courts, they should be required, as in the English service, to attend, for a stated time, the proceedings of all courts-martial that may be held at their station, and not be nominated members of courts-martial until the commanding officer shall report them as competent to perform so important a duty.

For the purpose of showing how perilous it would be to attempt to new model our present judicial system after the pattern furnished by the criminal law and procedure, I will quote from the public press:

"No one who has had any experience with the practical administration of criminal justice can doubt that people who have influential connections, of one kind or another, are less frequently and less severely punished for crimes committed by them than are those people who have no such connections. It is not merely or chiefly what may be called a clearly illegitimate exercise of political or personal 'pull' that produces this difference. The causes are more diverse and more subtle. A young man commits an offence, perhaps a serious one. He or his people have friends of respectability and more or less influence. These friends see the prosecuting witnesses, and press strongly upon them the possibility that, if this offence be overlooked, a worthy citizen may be saved to the community and the family spared permanent disgrace. In very many instances considerations like these prevent any prosecution at all. Even after the prosecution is begun, similar representations to prosecuting officers often lead to an entry of a stet or a nolle prosequi. * * * When a criminal case is brought to trial, the offender who has money enough to procure good counsel, or who has friends enough in the

community to create more or less sympathy for him, stands a very much better chance of escaping conviction, though guilty, than do those unfortunate members of the community who, though no more guilty, have no such assistance rendered them."—*The Nation*, Jan. 11, and *New York Evening Post*, Jan. 13, 1903.

Do we want any judicature resembling this by which to try our military offenders? Is all that has happened amiss in the course of the military administration of justice reason enough for the destruction of our system? Will any unprejudiced person claim that enlisted men should be tried by their peers because this is both the letter and spirit of the common law and of free institutions? Where the military service would profit by this innovation I leave to the Army to judge.

All changes in our military system have, generally, been effected under the guise and misnomer of reform. To preserve our military system entire and practically equal in all its parts to the end of its formation we must not confound reform with innovation.

If our judicial system is losing in its dignity and estimation because of an *opinion* that our courts-martial do not always act on worthy motives it is a weakness demanding, not innovation or reform, but that the *conscience* be *aroused*. The remedy for all complaints against our system appears to be in our own hands to apply, if we would preserve the principle that cases involving questions of military discipline and military duty alone are cognizable only by a military tribunal, and not by a court of law.

My opinion is against all meddling on the part of civil authority with the discipline of the army.

THE ARMAMENT OF FIELD ARTILLERY.

By First Lieut. EDWIN R. STUART, Corps of Engineers.

FOLLOWING paragraph 1050 of the Drill Regulations* will be found general instructions for the use of field artillery under all the different conditions of attack and defense, in which the governing idea is that as soon as the enemy is encountered, the artillery is to come at once into position and open fire; that after the position of the enemy is thus developed, the artillery will move forward to engage in an artillery duel; that after the artillery of the enemy is silenced the guns will be turned on his infantry to shake and demoralize it, and thus pave the way for the attack of our own infantry; that during the infantry attack the artillery will move forward to its support; and, finally, that the artillery will assist in the pursuit of the enemy, or cover the retreat of our own army in case of defeat.

Paragraph 1086 outlines the methods to be employed to avoid the interference of smoke with the fire of the guns in action.

The drill regulations thus had in view the employment of the 3.2 inch field gun, using black powder. Since their publication, it has become necessary to adopt a new gun for the field artillery which shall use smokeless powder. Experiments and tests have consequently been made, and we have adopted a type of field gun whose caliber is three inches, and whose mount is designed for rapid fire.

Compared with the old 3.2-inch field gun, the new gun shows an increase in weight of projectile from 13½ pounds to 15 pounds; an increase of 40 to 50% in range, and a rate of fire of 20 rounds per minute, as against 3 or 4 for the old gun. The rate of aimed fire shows even more favorably for the new gun, on account of the controlled recoil.

We, therefore, pass from the black powder to the smokeless powder era, and find ourselves about to be armed with a

*1050. *General Remarks.* Artillery has no independent role on the battlefield; it acts in conjunction with the other arms; its duty is to prepare and support. Artillery Drill Regulations, U. S. Army.

field gun of approximately the same weight and caliber as before, the only advance being the increased rate of fire due to a more perfect mechanism, and the increase in range and power due to a more powerful powder.

The question arises: Has not the introduction of smokeless powder made the conditions of the modern battlefield such as to require a more radical change in the armament of our field artillery than the one we are about to make?

While many of the provisions of our present drill regulations become obsolete with the introduction of smokeless powder, the duty of the field artillery will always remain the same—to prepare and support.

One of the most prominent lessons of the recent operations of the British in South Africa has been that on the defensive it is possible to conceal a position to an extent not hitherto fully appreciated, and that the reconnaissance of a position by the ordinary methods was practically impossible. A position could only be thoroughly developed by a more or less determined attack, and all the earlier stages of the battle were frequently fought against an enemy whose position was known only in the most general way.

It might be argued that under similar conditions to those encountered by the British in South Africa, our own troops would have obtained very different results. Judging from the published reports of the recent manœuvres at Fort Riley, no determined effort was there made to conceal the positions to the extent that was done in South Africa, for the field artillery used black powder, and we find reference to mounted officers and the flashes from bright scabbards disclosing positions that would otherwise have remained concealed. The troops are also repeatedly criticised for failing to take advantage of cover. Even so, with the example of the British before them, we find our own regular infantry suffering disastrous (theoretical) loss by fire from troops in trenches whose location was not suspected until too late. There is, therefore, no reason to assume that what happened to the British would not have happened to our own troops under similar circumstances.

Acting on the defensive, it lies within our power to conceal our positions from the enemy; acting on the offensive, we may be compelled to attack positions about which our information at the best will be very indefinite. These conditions

have a most direct bearing upon the employment of field artillery.

Since the reconnaissance of a position may be prevented by infantry fire at long range, it is manifest that whether or not an artillery duel occurs is optional with the defensive.

The three-inch field piece is of such size as to forbid any considerable movement by hand, and to make it easily visible at all except the longest ranges. Its ammunition service requires that several men be in constant motion while it is in action. The blast of the gun will raise a cloud of dust except under the most favorable circumstances. An ounce of black powder is required to ignite its smokeless powder charge, and this will cause some smoke. It is apparent, therefore, that a gun of this size can not as a rule remain in action except at the longest ranges, without its location becoming known.

As above stated, the defensive may engage in an artillery duel or not, as he chooses. If the foreground is clear to extreme range, it may be to his advantage to do so, as in this case his dueling batteries need not definitely reveal the position of his infantry. If the defensive does so elect, there is no reason why he should not open upon our three-inch gun with one of superior caliber and range, for while three inches may be regarded as the limiting caliber which will allow the mobility required of a gun that has to perform evolutions rapidly on the field of battle, *i. e.* one that can be used both to prepare and to support, it is not the limit of the caliber of guns that may be carried with an army in the field.

A gun of heavy caliber, which for the purposes of this discussion will be assumed to be four inches, may be moved with an army in the field. The Boers found it practicable to carry six-inch guns with them. These heavy guns may be placed in position by the defensive ready to open fire at long range. In the case of an artillery duel, we may, therefore, find our three-inch gun charged with the duty of subduing by fire at long range a gun of much heavier caliber than itself. The infantry of the defense may occupy positions in front of the artillery which will make it impossible for the three-inch gun to come to closer range where its deficiency in power would be less severely felt.

Should the enemy elect not to engage in an artillery duel, but to remain concealed in his position and decide the combat

by an engagement at closer range, there seems to be no way for the artillery to compel him to disclose the disposition of either his infantry or artillery, since, in order to force him to do so, it is necessary to open upon him a fire so destructive in its effect that he must return the fire in self-defense, and this requires that his position be definitely known. If the defensive chooses to remain concealed, our three-inch gun will find no definite target upon which to direct its fire previous to the time when the infantry becomes closely engaged, and its preparatory function will thus be completely nullified.

The duty of preparation, if it can be performed at all by artillery, requires the possession of artillery of the heaviest caliber consistent with only such degree of mobility as is necessary to enable it to keep its place in the marching column, for this heavy artillery does not require the mobility which would enable it to maneuver rapidly on the field of battle, since it can not best perform the duty of supporting the infantry attack. It is now proposed to show that this duty can not be done by the three-inch gun, but requires the use of a smaller caliber.

Let us suppose that our enemy, instead of providing himself with three-inch guns for the closer stages of the combat, has provided himself with an equal number of rapid-fire guns of smaller caliber. For the purposes of this discussion, the inferior limit of caliber consistent with the use of an explosive shell will be assumed. To take a well-known gun, we will assume that it is the Maxim quick-fire one-pounder, better known perhaps as the pompom. This gun has an extreme effective range of 3,000 yards, and a maximum rate of fire of 250 rounds per minute. The total weight of the gun, carriage, and 300 rounds of ammunition is a little over 2,700 pounds. The gun itself is small enough to be maneuvred over considerable distances by hand. Its blast and flash are insufficient to betray its location at the ranges at which it can engage with effect. It makes no smoke. Its service requires but five men, and can be conducted so as not to reveal its position by the movements of the detachment. The gun itself is small and can be easily concealed.

Having engaged in an artillery duel at long range with guns of superior caliber, during which the infantry of the defensive has suffered little if any loss and has remained concealed, the three-inch gun must move forward to support the infantry

in the attack. This forward movement brings it under the destructive fire from the enemy's infantry at long range, while the pompoms of the enemy begin to drop shells about and among the guns of our three-inch batteries.

These three-inch guns will offer an excellent target at 2,000 yards, but the infantry and the pompoms of the defensive remain concealed and our three-inch guns will not be able to find a definite target for their fire. They cannot protect themselves and the infantry by their fire, because an effective fire requires a good target. They cannot remain, and further advance will only increase the difficulty. Their visibility is their ruin, and this is due to their size.

It is true that both the shell and the shrapnel of the three-inch gun are far superior individually to the shell of the pompom. The latter cannot use an effective shrapnel on account of its small caliber, but the days of the extreme effectiveness of shrapnel are past. It cannot be made destructive against an unseen enemy, or against infantry in the extremely open formation of modern attack, and the size of a gun suitable for effective shrapnel robs it of the protection of concealment, which all signs point to as essential to survival on the battlefield at the closer battle ranges.

If we assume the offensive against an enemy who has provided himself with an artillery equipment consisting partly of four-inch guns and the remainder of pompoms, we find our three-inch guns inadequate for the duty of preparation if the enemy elects to engage in an artillery duel, and too heavy to take an effective part in supporting the infantry attack because of the visibility which its size and power entail.

If we act on the defensive against an enemy so armed, the result is the same. There is no other course open than to decline the artillery duel, as it would be fatal to engage an enemy armed with superior caliber guns if both are visible, as they would be in this case.

When we are forced to open fire in the closer stages of the action, we make of ourselves a target for his heavy guns which have so far taken no part in the conflict, while the lighter guns of the attack, manœuvred by hand, can take full advantage of any slight cover offered by accidents of the ground.

Another very serious difficulty with the three-inch gun is its supply of ammunition. There must be carried for it a sufficient amount to last it through the engagement, remember-

ing that it may be in action from the earliest stage to the last. The 3.2-inch gun was provided with a supply of 273 rounds per gun. The supply of ammunition in the long range duel offers no difficulty, but the supply in the closer stages of the action offers a grave problem. It is to be remembered that at its maximum rate of fire, the entire supply carried for a 3.2 gun would last the three-inch gun less than 15 minutes. Its limber chest will not carry more than a two-minute supply if the gun is to retain any great degree of mobility. If, therefore, this gun is to support the infantry in the closer stages of the attack, it must be accompanied by its caisson at that time, for the supply of ammunition by hand will be impossible on account of the weight of the charge. Both it and the pompom must, therefore, engage in the last stages of the action from the nearest point at which cover and concealment can be found for the ammunition. The total weight of ammunition expended by the pompom and the three-inch gun in the same time interval will be about the same.

It remains to consider the effect that the use of the four-inch gun and the pompom, instead of the three-inch gun, will have on the total weight to be transported with the Army in the field on account of the artillery.

The four-inch gun will considerably outweigh the three-inch, though no definite data can be presented. The supply of ammunition for its use need not go beyond the requirements for the artillery duel, and need not exceed 150 rounds per gun. The total weight of the charge for the four-inch gun will be about double that of the three-inch gun, so that 136 rounds per gun for the four-inch gun would involve about the same weight as the present supply for the 3.2 gun, and each four-inch gun carried by the Army would involve only the excess weight of the gun and its carriage.

The complete round for the three-inch gun weighs 20 pounds, if fixed ammunition be used. The round for the pompom weighs 1½ pounds. The gun itself, with 300 rounds of ammunition, is lighter than the three-inch gun. Two hundred and thirty-one rounds of ammunition are carried for the three-inch gun in addition to that in the limber. On the same weight, 3,080 rounds of additional ammunition for the pompom can be carried, giving it a total supply of 3,380 rounds, which at its maximum rate of fire is about the time equivalent of the supply carried for the three-inch gun.

The pompom with 3,380 rounds of ammunition can be substituted for the three-inch gun with 273 rounds, with a net saving in weight in favor of the pompom equal to the difference in weight of the guns and carriages, which is about 1,000 pounds, and this saving is in the place that will increase the mobility of the piece in action, *i. e.* in the piece itself.

The adoption of the heavier gun for the preparation, and the lighter gun for the support, involves the use of fewer guns for each duty, and the almost entire sacrifice of shrapnel fire.

It may be said in favor of the adoption of this armament, however, that it is difficult, and frequently impossible, to find places on the battlefield for the present equipment of guns considered essential for an army in the field, and that the duty of preparation, if performed at all, may be equally well performed by fewer guns of greater power.

An analysis of the conditions shows that the defensive may choose the weapons to be used in war, for if the defensive can be successfully maintained, national integrity can never be destroyed. The weapons best suited to the defensive must, therefore, be adopted by all nations, for a double equipment is impossible.

The strongest single element of the defensive is at present its ability to conceal the defensive positions of its infantry. The artillery armament adopted must conform to this idea.

Artillery for use at long range may open fire without disclosing the infantry positions, and need not be concealed, but the artillery which supports the infantry in the close stages of the attack must be in close proximity to the infantry, and must not betray the infantry position. The former must be of the heaviest caliber possible, and the latter must allow concealment.

The calibers advocated in this discussion are meant as types fulfilling these conditions. The three-inch gun does not fulfill either.

Whether the same organization that is contemplated at present will answer for the armament advocated is a question that must be decided by further study. It would seem that the smaller caliber guns would more efficiently perform their function if dispersed upon the fighting line to a greater degree than is desirable for a larger caliber gun, and this would call for the batteries to be assigned to smaller units than at present.

The adoption of a less powerful weapon in order to gain the advantages of concealment would bring about the same conditions as existed when all artillery was less powerful than at present, and that the proper organization for an armament of this class would call for brigade, or possibly even regimental, artillery.

In any case, the heavy artillery would be used in concentrated batteries, and the four-inch guns shoud be attached to the corps of an army as a rule, and to smaller units only when acting independently.

WEST POINT, January 26, 1903.

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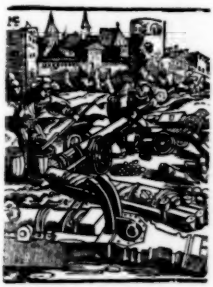

London: John Murray, Albemarle Street.

Edwd Weller Lithe.

OUR NAVY ON THE PACIFIC COAST, 1847.

A PEACEFUL BLOCKADE.

MAZATLAN from seaward is a picture not readily forgotten, but never yet adequately photographed. Its turquoise semilune of a bay, symmetrically set between three precipitous islands to the north and three to the south, washes the very hem of the town whose adobes turn to marble with distance and the sun. On the northern outer island—once refuge of wholesale *cimarrones* (runaway slaves)—perches the lighthouse, perhaps 300 feet above the tide. It poses at home as the highest *faro* in the world. As a matter of fact, that of San Lorenzo, in front of Callao, is more than thrice as high.

This outpost of the tropics—six leagues south of the Tropic of Cancer, and already in sight of the Southern Cross—is now the (commercially) first port on the Pacific coast of Mexico, and until very recently was surpassed only by Vera Cruz. Now Tampico and Coatzacoalcos will far outstrip it, and will not come back to its own until one of the transcontinental lines creeps down to it.

From the seaman's point of view, it is a poor harbor—in fact, it is no harbor at all, but merely a good roadstead. Vessels of 18-feet draught anchor a mile and a half from the wharf, and further familiarity must be left to the lighters. But, politically and geographically, it is a very important point. It is key to the Gulf of California—or Gulf of Cortez, for its discoverer; or *Mar Bermejo*, for its tinging of its waters by ferruginous streams—and is, so to say, the midway port of the Mexican West. Up the gulf are the good harbors of Guaymas (reached by the Sonora railroad from Arizona) and of Topolobampo, destined to be the terminus of another line from the "States." Down the coast are the magnificent natural harbors of Manzanillo and Acapulco, besides various *embarcaderos* of less future.

Mazatlan has possibly 12,000 souls, and its manufactures are minor; but it commands a vast interior of rich potentiality. It was formerly port not only for Sinaloa, but as well for Sonora, Chihuahua, Durango, and so far inland as Zacatecas.

The opening of ports at San Blas and Manzanillo cut it down at home, and our San Francisco has put a knee in its old-time China trade; that commerce goes now to California first, and is thence parceled out to Mazatlan.

Its coast trade is still important, and the prospects more so. It is the commercial centre of rich mining districts, and gold and silver bullion form the great majority of its exports. The famous mines of the Real del Rosario, twenty-seven leagues inland, were discovered in 1655, and are still profitably worked by newcomers. * * *

For a town founded in 1822 with a few huts, Mazatlan has had its fair taste of history. It has changed its name thrice, beginning as Ortigosa, rising to Villa de las Costillas, and finally adopting its present name from the Aztec—*mazatl*, deer; *tlan*, place. It has been several times the capital of Sinaloa, and all times a nest of revolution. It became a garrison town in 1844, and lost no time in rebelling against Santa Anna. In 1846 it hatched another revolt. We blockaded and finally captured it in 1847. Mexican revolutionists took it by storm in 1859. In the sacrifice of Maximilian it figured again, being the only foothold in Sinaloa of the meddlers. The French corvette *Cordelière* bombarded it in 1864, but was driven off by one agile cannon in the plaza. Seven months later a French naval division captured the town after a bombardment, and it was Maximilian's for two years to a day—when General Corona recaptured it and put an end to intervention in Sinaloa. In 1868 Mazatlan was again the seat of a revolt against the government, and for three years was infested with troubles. In 1871 it rose again, and was taken by storm in the following year—only to erupt once more in 1876. The list of governors of Sinaloa since the State was founded (1830) is of more length than breadth—with its incumbents "for ten days," "for two days," "for seven days."*

The blockade of Mazatlan in 1847, referred to above, came very nearly causing war between Great Britain and the United States, only averted by the good sense of the American and British naval commanders on the Pacific Station, as may be seen by a glance at the inner history recorded on next page.†

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* Mexico of To-day, by Charles Lummis. Harpers: N. Y., 1898.

† Extracts from the private Journal of Commander (the late Rear Admiral) John B. Montgomery, U. S. N., commanding U. S. Sloop of War "Portsmouth," 1844-48. Continued from JOURNAL M. S. I., Sept., 1902.

THE BLOCKADE OF MAZATLAN.

Mazatlan, March 2, 1847. "At 11 A.M. made a visit to the British Frigate *Constance*, was cordially received and treated by Sir Baldwin Walker, with whom I conferred more than an hour upon the points of correspondence respecting which we were at issue. He stated in substance the views of his government to be as follows: that under a proclamation at the general blockade of a whole coast no single port or any portion of said coast can be lawfully blockaded without actual investment of the whole extent embraced in the proclamation; in fact, that a general proclamation involved the alternative of actual investment of the whole assumed ground or of losing the right to blockade any part of it. In confirmation of which Sir Baldwin read passages from several foolscap sheets of manuscript, which I inferred to be a manual of general instruction; likewise reference was had to a large volume from which several passages were read, as evidence of practice, etc., and I was informed that the British officer's specific instructions in relation to the coast of Mexico were to regard no blockade of a port, or any part of the coast, short of the whole extent, by the forces of the American Squadron, as being in a state of lawful blockade, and upon this principle to give protection to English vessels. I stated in return that adopting British practice as the rule, examples directly at variance with the principles just advanced, I believed might be adduced; that I had taken the liberty of citing (in my answer to his communication) one instance, selected for its peculiar and forcible adaptation to the case in point; that under a general Proclamation of Blockade of exterior coasts, a few ports only were actually invested, while a right to exclude neutral commands from the others was claimed and exercised by the Naval force employed; that protest or remonstrance by the government of the United States being made, the ground of complaint was removed by a simple order of the Admiralty to the British Commander-in-Chief, to restrict the operation of blockade above the ports actually invested. I continued that a failure to comply with the extravagant terms of the Proclamation in this instance seems not to have vitiated or prevented grounds of objection to the prosecution of the partial blockade established under its sanction. Sir Baldwin observed that he had not been able to find the case, and enquired whether I felt certain that there was not another proclamation issued as a basis for the restricted order of blockade, to which I replied that I inferred not from the fact that none other than the original proclamation was named or alluded to in what appeared to be a full and complete statement of the case as presented in the United States diplomatic code.

Sir Baldwin remarked that the only blockade which had been attempted on the coast by two United States ships had been raised

or abandoned three months since, and referred, I think, to his manuscript to show that this act alone vitiated all succeeding blockades declared under the original Proclamation, and involved the necessity of commencing *de novo*, holding that another Proclamation by the government was essential to the right of resuming blockade. He also caused to be read from a manuscript the names of a number of vessels, English, French and others, which had been allowed to pass into Mazatlan by the vessels formerly employed in the blockade. I replied that I was aware of the employment of the *Warren* and *Cyane* on the coast, and as I believed on blockade of the ports of Mazatlan and St. Blas, and also that they had returned to the Northward, but that my instructions furnished me with no information respecting the duties and operations of those vessels on this coast for the government of my course. They were specific and required me, with the force under my command, to invest or blockade the port of Mazatlan alone; that I regarded my duties as referring only to the said port, with adjoining coasts and islands, co-extensive with my means, surveillance and enforcement. After a short digression, feeling to be very important to learn if possible the nature and extent of opposition that I had to expect to the execution of my duties on the arrival of an English merchant ship on the coast, two being daily looked for, I resumed: "May I be permitted, Sir, to inquire how far you may feel it your duty to oppose the execution of mine as blockading officer, on the arrival of an English vessel off this port?" He replied with an expression of serious feeling, "Really, it is a hard question." I think those were the words. I asked whether he thought it was contemplated by our governments to leave the final settlement of questions growing out of conflicting views of duty to Captains acting under superior Commanders, who, invested with the power of government in all matters of official duty, might readily be referred to; and continued, "I regard my duty as requiring the prosecution of the service assigned, and would not be justified by the conflicting views and orders of foreign officers and the presence or menace of superior force, to abandon it. That it was very questionable in my view whether an officer acting under orders could in any manner be authorized to abandon the duty assigned him for anything short of collision, and actual collision." Sir Baldwin replied, "I think it hard that such matters should be left to Captains, under the circumstances. I, therefore, make the proposition that if you will allow communication between the Captain or Super-cargoes and consignees of English vessels bound to Mazatlan, with a view to their receiving fresh instructions, which is important for vessels after a long voyage sailing from England with the impression that the blockade had been raised, I will avoid interference with your duty of examining and warning

vessels off from the port of Mazatlan," remarking that the privilege of communication was not an uncommon indulgence.

"And I readily consented to the proposed arrangement, with the understanding that the whole subject was to be referred to our respective Commanders-in-Chief."

(SECOND CONVERSATION WITH SIR B. WALKER.)

March 23, 1847. "At 1 P.M. Sir Baldwin Walker came on board to make a call. After sitting a short time he said that he brought with him for my perusal some documents which he had received from Mr. Bankhead, the British Minister at Mexico, relating to blockade, which he handed to me. They were letters from Admiral Rowley and another British Commander and Captain Spence, late of the United States Navy, protesting against a blockade of the coast of Central America in the years 1821 and 1822, from which it appeared that one of the objections urged by Sir Baldwin against the legality of the existing blockade, viz.: the non-investment of all the ports included in the General Proclamation of Commodore Stockton, furnished the sole ground. After a few general remarks upon the applicability of the principle thus set forth and effectually maintained to the existing blockade, Sir Baldwin observed that he believed he had done wrong in yielding or waiving the point of protest at first presented, for which he said that he might be censured. I replied that I so highly appreciated the amicable spirit and motives which I verily believed had alone induced him to waive the strict construction of his orders so directly in conflict with mine, that I should most deeply regret any unpleasant consequences on that account; that his very superior force to that of the blockade shielded him from injurious surmises, and must naturally lead to correct inferences respecting the motives of his course. He replied, with his characteristic urbanity and pleasantry of manner, 'Yes, if you had been in a Frigate, I should have acted differently.'

"I should do violence to my feelings and convictions by omitting here to remark that I believe Sir Baldwin spoke most sincerely, and in this observation exhibited most clearly the real motive of his moderation and forebearance. Indeed, the many kind courtesies and attentions of Sir Baldwin Walker attending our official intercourse from beginning to end (though commenced under a threatening aspect) has impressed my mind and the officers of the *Portsmouth*, I believe, with sentiments of highest respect and esteem for his character as a man and distinguished British officer. May favor and prosperity attend him.

"Sir Baldwin seemed desirous that I should (if practicable) communicate the state of things to the Commander-in-Chief, as I inferred, by his asking if I could not by some means send to him. I told him that I was in hourly expectation of an opportunity by

the *Erie* expected from the South, and also looking for arrivals from the North. I remarked that, unless otherwise directed, I expected soon to leave here. I had reference to the duties assigned me on the west side of the Gulf, and the low state of my provisions, which would require my return to California in twenty days, unless supplied before that time. After some friendly conversation Sir Baldwin left the ship."

* * *

In his report to the Commander-in-Chief of the Naval forces of the U. S. in the Pacific, Commander Montgomery wrote that "the blockade of Mazatlan was effectually maintained by the *Portsmouth* for nearly six weeks, although generally opposed and protested against on the ground of illegality, and the service was not relinquished until I had satisfactorily secured the means of communicating Commodore Stockton's orders to Lieutenant-Commander Turner as directed, and the low state of my provisions admonished me of the necessity of immediate attention to duties assigned me on this coast. I think it proper, Sir, with the view of averting from others the serious embarrassments through which I deemed it my imperative duty (in obedience to specific orders) to persevere in maintaining the recent blockade of Mazatlan, to apprise you that, unless commencing *de novo* by proclamation, any attempt to re-establish a blockade of one or more ports, short of all named in Commodore Stockton's proclamation of August last, will be strenuously opposed by the representatives of neutral powers. Nothing but the amicable forebearance and courtesy of Sir Baldwin Walker, of H. B. M. Frigate *Constance* (such as could only with safety have been exercised by a superior to a very inferior force), prevented a serious difficulty (possibly collision between our ships) growing out of conflicting orders respecting the blockade."

The British government was so much impressed with the firm but reasonable treatment of the interests of neutrals by the American Commander at Mazatlan, that the following handsome recognition of Montgomery's official conduct by Lord Palmerston was transmitted to him through the Department of State (of which James Buchanan was the head) and of the Navy (then presided over by J. Y. Mason).

(No. 4). FOREIGN OFFICE.
June 30, 1847.

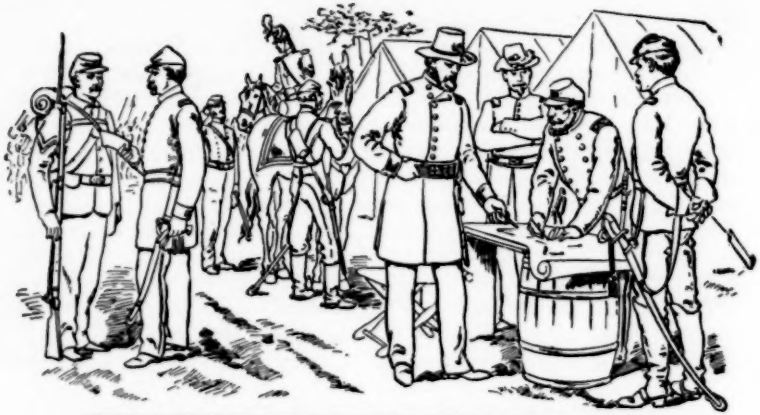
Sir:—Captain Sir Baldwin Walker, commanding Her Majesty's Ship *Constance*, on the west coast of Mexico, has mentioned in his reports in very favorable terms the kind and considerate manner in which Captain Montgomery, of the United States Frigate *Portsmouth*, has conducted himself toward neutral vessels whilst he has been employed in blockading the Port of Mazatlan, and I have to desire that you will take an opportunity of conveying to the United States Secretary of State the acknowledgments of Her Majesty's Government for Captain Montgomery's courteous treatment of British subjects upon this occasion. I am, etc., etc.,

J. F. CRAMPTON, ESQ. PALMERSTON.

In his message to Congress for the year 1847, President Polk remarked as follows:

"On the 31st of March last I caused an order to be issued to our military and naval commanders to levy and collect a military contribution upon all vessels and merchandise which might enter any of the ports of Mexico in our military occupation, and to apply such contributions toward defraying the expenses of the war. By virtue of the right of conquest and the laws of war, the conqueror, consulting his own safety or convenience may either exclude foreign commerce altogether from all such ports, or permit it upon such terms and conditions as he may prescribe. Before the principal ports of Mexico were blockaded by our Navy, the revenue derived from import duties, under the laws of Mexico were paid into the Mexican treasury. After these ports had fallen into our military possession, the blockade was raised, and commerce with them permitted upon prescribed terms and conditions. . . . In directing this measure, the object was to compel the enemy to contribute, as far as practicable, toward the expenses of the war."

The President also mentioned that "In the Gulf of Mexico, and in the Pacific, the officers and men of our squadrons have displayed distinguished gallantry and performed valuable services. In the early stages of the war with Mexico her ports on both coasts were blockaded, and more recently many of them have been captured and held by the Navy."



Comment and Criticism.

"Paragraphs 93, 97 and 88, of General Orders 100."

Major C. J. Crane, U. S. Infantry, Asst. Adjt. Gen.

These paragraphs of our war instructions read as follows:

93. All armies in the field stand in need of guides, and impress them if they cannot obtain them otherwise.

97. Guides, when it is clearly proved that they have misled intentionally, may be put to death.

88. Men, or squads of men, who commit hostilities, whether by fighting or inroads for destruction or plunder, or by raids of any kind, without commission, without being part and portion of the organized hostile army, and without sharing continuously in the war, but who do so with intermitting return to their homes and avocations, or with the occasional assumption of the semblance of peaceful pursuits, divesting themselves of the character or appearance of soldiers, such men, or squads of men, are not public enemies, and therefore, if captured, are not entitled to the privileges of prisoners of war, but shall be treated summarily as highway robbers or pirates.

Under the first named paragraph we may "impress" guides.

The impressing of a guide presupposes his unwillingness to serve in that capacity, for there is more than a mere suggestion of compulsion in the meaning of the word "impress," Webster's Dictionary giving as the only definition applicable to this case, "to take by force for public service." Under this regulation we evidently have the authority to compel by force, if necessary, the unwilling yet true service as guide of any inhabitant of a hostile territory in which we may be waging active war.

And, since no exception or qualification is given as to the character or nationality of the guide with respect to our own cause, it follows

that we may, under certain conditions, use the authority contained in this regulation to obtain guides from among our own people when necessary.

But this discussion is intended to deal with the condition of war in a hostile country, and more especially with our recent service in the Philippines.

Then, to obtain the service of a Filipino guide, we could even have taken it by force when it could not be obtained otherwise.

The service of guide in the face of the enemy is deemed so important that a false guide may even be put to death, under the authority contained in Par. 97.

We take a thing by force from an *unwilling* giver, no compulsion being necessary in dealing with friendly or willing persons.

Where is given us the definition or limit of the nature and amount of force allowable in this case?

It is assumed that we are after our enemies, that we have some information as to the whereabouts of the object of our search, that in "taking by force for public service" the services as guide of "our little brown brother," in the application of such force we are not inflicting suffering for its own sake or for revenge, nor will we maim instead of killing even a false guide. But we are clearly authorized to literally compel by force the services of the guide, no matter how unwilling he may be.

Our discussion refers principally to a condition of war with Malays, on their native heath, but in territory which was and is, ours by treaty and actual occupation.

As to the nature and amount of force necessary to enable us to avail ourselves of the rights granted by Par. 93, who was to be the judge, in the absence of positive instructions on the subject? One would naturally infer that under such conditions as may render necessary the immediate and instant services of a guide, and that guide demurring, and the issue of the expedition seeming to depend on his guiding, the Commanding Officer on the spot is to be the judge and the final arbiter of the question.

Perhaps, in sight of the object desired, the expedition may return disheartened and discouraged for lack of a leader who will make that traitor guide us. In such case, what is to be done with the officer? Has not paragraph 93 prescribed his duty, and is it not neglect of duty for him to fail to use the power expressly given him in the regulation quoted?

Perhaps the officer, better acquainted with the provisions of paragraph 97, after trying to convince the guide by mild persuasion, or possibly by harmless imprisonment and empty threats, may feel himself forced up against what seems to be his duty under that paragraph.

Who knows how often and how earnestly and honestly all these phases of our Philippine service were discussed by our officers in the Orient, and how faithfully they endeavored to work out a reasonable, successful and correct solution of the knotty problem presented to them?

The average American officer in the Philippines carefully studied General Orders 100, and while noting the many powers granted him in some, the many responsibilities imposed upon him by others, he remembered all the time that he was struggling with an enemy who was not entitled to the privileges usually granted prisoners of war, and that under paragraph 88, summary punishment should be meted out to those clearly offenders.

What is the meaning of the word "summary" which describes the treatment to be given them as "highway robbers or pirates"?

"Rapidly performed, quickly executed," says Webster.

From the very meaning of the word "summary" it is seen that no court-martial or other regular tribunal was contemplated in describing the punishment of offenders under paragraph 88.

How many tens of thousands of Filipinos were properly entitled to "be treated summarily as highway robbers or pirates"!

Who was to be the judge, jury and executioner in such a summary process?

A true appreciation of the character of the warfare we were waging in the Philippines seems impossible to those who did not witness it, and many participants in the struggle have failed to fully understand that we were practically fighting an Asiatic nation in arms and almost every man a soldier in disguise and a violator of paragraph 88. General Malvar's testimony before the Gardener Board is conclusive as to what kind of a fight he was making. His testimony before that Board cannot be too well known. Did he not say, in effect, that the insurrection could not have existed in any town which contained one single American sympathizer?

No army was ever so blindly generous and forbearing as was ours in the Philippines, although fighting the most treacherous people in the world, a people who mistook our justice for lack of brains and our leniency for cowardice.

"The Lack of Small-Arm Experts and of Interest in the Rifle."

Lieut.-Colonel James Regan, 9th U. S. Infantry.

This paper of Captain Low treats on a subject that is of vital interest to the Nation at large, namely, to its organized forces, and to its militia, organized and unorganized. The importance of this subject is on a par with drill and discipline. An undisciplined and undrilled man may meet with success as a partisan, as did the minute men of '76, between Concord and Boston, and he is infinitely more valuable than the man who does not know how to shoot; but in the true military sense, when large bodies of men in closed or dispersed order, moving in combination, and with the same objective in view, drill, discipline, and marksmanship are inseparable. In a previous paper I had occasion to refer to this subject, and I was glad to see in a letter in a recent *New York Times* that there is another man, Mr. May, who thinks almost as I do, as to spreading the knowledge of the rifle among our people. He recommends, in part:

"That the United States Government should undertake to teach the use of the rifle to all the young citizens who choose to learn, without any cost to them. That can be done by establishing numerous easily accessible rifle ranges, more particularly in large centers of population, where it is impossible for any except the wealthy youths to have any experience with the use of the rifle, which should always be of the latest and most improved form in use in the Regular Army. All men of the age of, say, fourteen and upward, presenting themselves should be allowed a certain maximum number of shots each week free and be allowed additional shots at the actual cost of the ammunition used. Record of the scores made should be kept at each range, and all making above a certain percentage should be given medals. All those making above a certain high average would be enrolled tentatively into the Corps of the United States Volunteer Sharpshooters. Once each year all entitled to this membership in this corps should be invited to a week's camp, and long distance rifle practice at the Government's expense. During this week the men could be instructed in camp duties and given a general idea of open order drill, such as would be of value to sharpshooters."

A scheme based upon ideas of this recommendation, or others having the same end in view, would tend to the accomplishment of the first suggestion in Captain Low's paper.

The assertion can be safely made that no army in the world for years just prior to the Spanish War gave so much attention in proportion to its numbers to the rifle, and rifle practice, as did our Regular Army and its officers. The large majority of company officers, especially those of the Cavalry and Infantry, were sharpshooters, and few, if any, fell below the grade of marksmen. None of them, I venture to say, could have been put in the position of the young, ignorant officer cited in this paper. The interest in the rifle and rifle practice was at fever heat. I have seen our Captains, men who had served with distinction in the Civil War, bend down on their knees in their anxiety to see that their men held their pieces level, and pressed on the trigger properly in aiming. I know the old officers of the 9th Infantry will recall how enthusiastic one of our Captains was. He was around his men, and over his men, while in the back or prone positions, anxious for the shot to strike for a 4 or 5. Every minute we would hear "Sergeant, where's the lubricant?" It was a rare thing in those days for men to shoot without first pressing the bullet on the oiled cotton, and after every five shots they would wipe out their rifles. The old officers can look back now with what satisfaction we hailed a calm day, when the flag was limp along its staff. There was a hurried move to the target range. "C" Company did not want to be behind "A" Company in the year's results. The books explained the points to take, right or left, according to the wind, but the rifle shots of those days did not depend entirely upon the books, because from their experience sniffing the air, and knowing the light, they instinctively made the proper adjustment for windage and elevation. It was this great care on the part of the officers that

made our regular army what it was at the beginning of our recent war, invincible and the marvel of the military experts of the world. Of course, our younger officers, who have gotten their captaincies in less than five years' service, a grade not attained by the older officer in twenty years, may not yet have reached the skill in rifle practice, that Captain Low emphasizes so strongly, or the high standard before the war; but it is to be hoped that they soon will, and that this paper will have the effect of spurring them on.

It is hardly conceivable that there can be so much ignorance and indifference in rifle practice, as this paper would indicate. Of course during active operations in the field it is not practicable to have regular target practice, although in the lulls from the habitual rifle practice in the trench, we used occasionally to fire about 25 shots at targets roughly improvised. If rifle skill was universal among our people, this would not be so important; but when men are shoved to the front, wholly ignorant of the rifle, it is absolutely necessary. This paper would indicate lack, at present, of proper preliminary instruction of the men in the rifle, and rifle practice. If this is the case the war has radically upset things, because before the war the companies, during the recruit period of the men, which was about three months or longer according to capacity, were instructed in the parts of the piece, how to take the rifle apart, and assemble it, systematically. And then the sighting and aiming, followed by gallery practice, was carried on with the greatest care, under their officers. Besides what the book requires we were urged on by orders in these affairs. The shooting records of the Army published in orders attest the splendid results of the care exercised in those preliminary instructions before the war. It behooves the new army, the same old army but younger, to come as near as possible the standard pointed out in Captain Low's paper.

Certainly our fire regulations can be simplified, and it ought to be done without delay, although the one revised by Captain John S. Mallory is excellent in many ways. The parts of the rifle, and how to take it apart and put it together again, and clean and oil it, simply stated, without too much particularity, can be placed in the "Soldier's Handbook." The three military positions are the only ones that ought to be encouraged, as they are the only ones used in war. Therefore omit from the "Firing Regulations" the sitting position and add a part explaining firing from "the trench, parapet, or the open." "The Company Field Practice" is excellent, and assimilates closely to actual war conditions, the great difference being the figures do not shoot back. It has always seemed to me that this kind of practice might be varied, in the way of placing groups of figures at unexpected places, so when the command or groups of men come upon them suddenly, the officers should be required to make the proper disposition, and the men watched to see if they take position promptly, and fire in the best position, with proper elevation, whether in the "trench, parapet, or the open."

"The Selection of National Guard Officers."

Lieut. John F. O'Ryan, 2d Battery, N. G. N. Y.

In New York State, it is proposed to amend the Military Code with respect to the manner of filling vacancies in the grades of commissioned officers. At the present time, line officers are elected by the enlisted men. The amendment proposed provides for the election of Second Lieutenants as now, but that a vacancy in the grade of First Lieutenant shall be filled by the promotion of the Second Lieutenant, a vacancy in the grade of Captain by the promotion of First Lieutenant, a vacancy in the grade of Major by promotion of the senior Captain, and a vacancy in the grade of Lieutenant-Colonel by the promotion of the senior Major. Other officers to be elected as now. These promotions are to be subject to the candidate passing a "rigid examination." Should the candidate fail to pass this rigid examination another opportunity shall be offered him within not more than three months, and shall he again fail to pass, he be allowed to resign and receive an honorable or full and honorable discharge, as the case may be. Such officer to have the privilege to decline promotion before the examining board.

This proposed amendment is now being discussed throughout the National Guard in New York State. The present system of election of officers by enlisted men, which obtains in the National Guard in many States, is undoubtedly a pernicious one. To it directly can be traced many of the short-comings of the National Guard. Discipline in National Guard regiments has suffered for long periods as a result of hotly contested elections wherein the enlisted men, who by their votes controlled the situation, were appealed to for their support by one or both candidates and their friends. The proposed amendment is a big stride away from these unfortunate conditions.

Discipline is the foundation of military organization and efficiency. Discipline is not best subserved when promotion of commissioned officers depends upon the favor of enlisted men. The majority of enlisted men of the National Guard have not the education, experience and acute military perception necessary to make the best selection in the case of a vacancy to be filled by promotion. The majority do not always distinguish between the educated and efficient officer and the less competent but perhaps more popular officer. Too often do enlisted men reward good-fellowship, liberality, appearance and friendship at the expense of discipline, knowledge and efficiency. The present system of promotion, though having its merits, is subject to these criticisms. A system of promotion which will advance the most efficient officers, and rid the service honorably or otherwise, as circumstances may require, of the incompetent and uneducated, the inefficient, of the physically, mentally or morally unfit, is much to be desired. The plan suggested will inure to the benefit of the National Guard. It is a step away from the old militia ideals of the earlier statesmen of our country; ideals which have been shattered on every occasion when they have been tested in our military history, but which still dominate the minds of present

day legislators to such an extent that they must be considered and handled strategically in proposing new legislation.

The amount of good which the National Guard will derive from the working of the system proposed will depend upon the application of the term "rigid examination." If this means that an officer submitting to such examination must show that he is an educated man in a general and military sense, possessed of the poise, judgment and discretion which belong solely to the educated man, capable of giving understandable and lucid orders and directions correctly, schooled not only in the minor tactics of his own arm of the service but well read generally in the field of elementary military science and history, organization and military law—if the term is to be construed to require these qualifications, and the further requisites that the officer must be physically fit for active service, and a man whose deportment and example would inspire the respect of subordinates, then the Guard would be immeasurably improved by the amendment proposed.

It would seem advisable, however, that provision be made to commission, in certain cases, officers or ex-officers of the U. S. Army who have had a required number of years' experience in the Army. As the law is now, it is possible for a command to elect as Captain an officer who has resigned from the Army to go into civil life and whose experience, education and ability might be valuable to the command by whom he is chosen and to the Guard generally. There are, no doubt, in the New York State National Guard, at present officers of that character who have been so chosen and whose presence as officers in the Guard is valuable. The proposed amendment, therefore, might, with benefit to the Guard, include a provision covering such cases.

"The Great Lesson of the Boer War."

Lieut. Colonel James Regan, 99th U. S. Infantry.

The paper of Major Chester has the proper ring in it, and what he says about sentiment in war is correct; it ought to be brushed aside. Of course this does not mean that all humane feeling should cease. Take a strong nation like the Americans in the Civil War, or the English in the Boer War. Either of them would have been justified by the rules of war in taking the most drastic and severe measures against such partisan warfare as that carried on by Mosby and the ununiformed bands in Boerland. War is hell, and the more hellish it is made the quicker it will be ended, and this is particularly so now-a-days that arms have been brought to such wonderful perfection. After the strong nation in war, irrespective of the question whether or not its cause is just, meets the enemy in fair fight and scatters him to the four winds, the war should end upon fair conditions. But should the defeated party break up into small bands and carry on a partisan or guerilla warfare, then the time has come to brush aside sentiment and for the strong nation to preserve the lives

of its soldiers by every permissible means in warfare. A few were disposed to criticise our soldiers for resorting to serious measures against the guerilla and ladrone bands in the Philippines, but leniency had never been carried to such an extent in any previous war, with the same provocations, as was done by our commanders and soldiers in the various operations on those islands. The savage, however, must be made to understand his crimes, by the most serious and persistent exercise of the rules of war. He does not understand that broad principle that "men who take up arms against one another in public war do not cease on this account to be moral beings, responsible to one another and to God." The mutilations and horrible treatment of our soldiers in the Philippines clearly demonstrated this fact. "Torture to extort confession" will never be sustained by any American. Whip them fairly and well, until they recognize you as master, then give them all the rights possible in the spirit of the Declaration of Independence.

Partisan warfare, when it is carried on under the rules of war, is strictly legitimate, and no doubt will be extensively resorted to in future wars, modern armament rendering it almost absolutely necessary. But, as Major Chester suggests, this kind of warfare can only be successful within limited bounds.

The great principles of warfare so grandly demonstrated by Adolphus, Frederick and Napoleon are as necessary to gain battles to-day as they were in their days. Serious and persistent fighting under intelligent and redoubtable leaders will be sure to succeed. Aggressiveness, or the offensive, nearly always is as pertinent now as it was in the times of those great commanders. Teaching men individuality to the extent of being masters of their rifles, and to take full advantage of the terrain of the arena of war, is a splendid thing, but all wars have demonstrated, even our last small war, that tactical organizations, closed or dispersed, cannot be held to their work without the presence of the officer, and that real success is due to his leadership.

"The Fort Riley Maneuvers."

Col. Arthur L. Wagner, Asst. Adjt. Gen., U. S. A.

On page 71 of the last number of the Journal of the Military Service Institution, the list of troops assembled at Fort Riley omits, through a clerical oversight, the First Battalion of Engineers. This organization, as shown in the sketch of the tactical exercises given in following pages, was present at the maneuvers, where it was conspicuously efficient, not only as a body of engineers, but also as infantry and in mounted service.

MILITARY PSYCHOLOGY.

By Dr. Campeano, Formerly of the Roumanian Army.

(Translated for M. S. I. by Captain N. S. Jarvis, U. S. A.)

TRANSLATOR'S PREFACE.

THE following chapters on a subject rarely discussed scientifically constitute the third part of a most interesting essay. The sections devoted to general psychology and the psychology of the crowd have been omitted, not because they lack interest, but for the reason that they cover a field of thought not uncommon in psychological discussions.

That portion of Dr. Campeano's little work which deals with the psychology of military bodies is unique and portrays much original thought. Its value has been emphasized in a preface edited by the distinguished French psychologist, M. Th. Ribot, and the author also includes an enthusiastic letter by General Canonge of the French army.

I.—THE PSYCHOLOGY OF THE INDIVIDUAL SOLDIER

The life of the barrack and the camp has a profound influence upon a man, which becomes more intense the longer the condition lasts. In fact, between a man and the medium in which he is placed exists a relation of osmosis and endosmosis (Sighele), and in the end the man is lost in the medium.*

* Osmosis is defined by Webster as the tendency which fluids of varying densities have to, mix and become equally diffused. Endosmosis is defined as the more rapid flow from the thinner to the denser medium.—Translator.

We can say that the barrack and the field of battle are media, having their peculiar customs and habits, which are clearly evident to those on the outside.

In discussing the psychology of the crowd we have seen that the individual undergoes a variety of transformations which either change him totally or even annihilate him. In the military body, however, the transformation operates slowly and peaceably by infiltration, so to speak, and in the end gives to those who make their career in the army an indelible stamp, easy to recognize.

The spirit of comradeship and subordination reduce to a minimum petty rivalries, and where the struggle for existence, intrigues and selfishness are rare, men are more correct. In the army, the necessity for obedience and the strictness in the execution of orders reduce to a minimum discussions and the interpretation of orders and give to the leaders a precision at times severe and summary. The climatic extremes and the trying lives to which soldiers are exposed strengthen the character of those who have grown old in the uniform. Thus we can explain the special peculiar stamp of the veteran. In Germany, the custom of according to each ex-officer a civil function corresponding to his grade has produced excellent results, for the country by virtue of this system obtains functionaries who have impressed on all its civil institutions a military character.

The principal qualities necessary for the soldier are: (1) Courage, (2) obedience, (3) devotion

(1) Courage.

Courage.—Military courage is of two kinds: (1) Indifference to danger, resulting from the fact that little value is placed upon life from the habit acquired of facing death, as in the old soldier accustomed to war; (2) It may have a positive, well-defined stimulus, such as patriotism and enthusiasm.

There is also a passive courage, *constant* because a part of the individual, and an active courage which emanates from the soul of the man, a sentiment, so to speak, which is temporary.

In order to be certain of the courage of certain men resource has been had to some sentiment which would render it more permanent, such as an appeal to their honor.

Nevertheless, a man who values his life too highly will never make a good soldier.

Fear may produce a paralysis of motion which may prevent the man from defending himself; it may produce such an enormous dilatation of the pupil as to bring about complete loss of vision.

Moss, in studying physiologically the effects of fear upon the lower animals, has observed an apparent suspension of the brain cells necessary to voluntary movement. In this study, we must lay particular emphasis upon the contagious nature of fear; nothing is more subtle, nothing more communicative than fear. The human instinct of self-preservation may disclose this tendency at the first sight of an enemy or at the first sound of artillery. In a general way, fear manifests itself insidiously and after some surprise, even among men the most courageous.

Observed in time, fear is easily supressed in those who by nature are not extreme cowards; for this reason, it is the duty of superiors to be constantly watchful of their men, explaining to them all possible contingencies, encouraging those timid by nature and, above all, preventing the communication of fright from one to another, for it

spreads like lightning and, the larger the command, the more dangerous its contagion. A good leader can arrest panics by a tactful stratagem, as, for example, the following incident in one of Cæsar's battles illustrates: His army was fleeing from the enemy, but rushing forward to meet the retreating columns, he seized a standard from one of the fugitives, turned abruptly, advancing toward the enemy, while he called loudly to his men, "You are mistaken, my friends; this is the direction you should move." The effect was miraculous; the fight was spontaneously arrested; the legions reunited and turned their front to the enemy.

It must not be forgotten, however, that in some individuals fear may exist as a pathological state, profoundly impressed and rendering them peculiarly sensitive to certain perils, real or imaginary.

An individual presenting such a "phobia" at the rumbling of a cannon or at the sight of blood will never be susceptible to encouragement and will constitute an element very dangerous in a body of men. Such elements should be absolutely eliminated, for these isolated "phobias" can communicate themselves in the form of fear to others with a tendency to generalization which may assume disastrous proportions.

Timidity.—If in time of war we occasionally meet instances of fear, in times of peace we meet quite often its sister, *timidity*. The latter fault we see most usually in recruits recently joined. Whoever has studied this question carefully and has observed studiously those recruits, often classed as imbeciles or "blockheads," will discover that they are really only timid by temperament. In fact, the peasant recruit who has lived an isolated rural existence, at times knowing no other village than his own, finding himself suddenly transplanted into a medium to which he is completely foreign and among men entirely in contrast with himself, concludes in his own mind that he is a painful contrast to those around him. He has a sense of incapacity and from this develops timidity.

Dugas gives the following definition: "Timidity is a distrust of self and of others, resulting from an inability to understand other men or to be understood; there ensues a torture from this sense of incapacity, which is keenly appreciated." So we sometimes see the new soldier with motor disturbances, inherent in this psychical state; he is awkward at drill and on fatigue duty, and particularly so if he is observed by his officers. At drill, he will handle his piece with embarrassment and awkwardness, and his movements will be neither free nor easy, not through stupidity but timidity. We must also bear in mind that awkwardness in one recruit may excite it in others; that all awkwardness tends to generalize itself. It should be remembered also that outside of these motor are psychical disturbances, of which the most serious is *mendacity*. The timid man lies—as an infirmity, a certain incontinence of the tongue. His falsehood is involuntary, a matter of diseased impulse, not premeditated. Properly speaking, these are instances of falsehood due to timidity for, on the other hand, we may meet with persistent falsifiers who have simply developed a bad habit. The man who lies by habit is culpable, but this cannot be said of the timid type which we are discussing. In the latter case the falsehood appears to be mechanical, resulting from the embarrassment in responding promptly to some question.

According to Ribot, "timidity invalidates and disconcerts all the motor work necessary to the attention; it destroys the *sang-froid*

necessary to comprehend, quite as well as to properly express what one knows."

Officers should take pains to recognize these recruits, of whom there are usually large numbers at the regimental schools. It is certain that if properly understood, remonstrances and punishments will then be applied much less often, and with a correct appreciation of this class much better results can be attained. We do not need to learn from philosophers that the best treatment of timidity is familiarity and that it is dangerous to provoke fear in the timid.

Officers should therefore refrain from the habit of scolding and vociferating on all occasions, of menacing and punishing their men, lest they encourage and develop a timidity with which many are already afflicted.

Patience and good nature on the part of the officer will accomplish much more in these cases than all his science, and, convinced that a portion at least of those who appear imbecile or stupid are merely timid, he will readily calm them and quiet their nervousness.

(2) Obedience.

Obedience is an ideal duty that we fulfill by an act of intelligence and free will, which thus dignifies and ennobles the submission to higher authority.

The situation of the soldier who has not comprehended and accepted discipline loyally is vile and ridiculous.

Such a soldier is obliged to obey, but his act of obedience is to him so much punishment and humiliation; he is in a state of perpetual revolt, but a revolt prudent and cautious, complacent before the master whom he fears, at times in fact; more servile than he, who obedient from a sense of conviction maintains his dignity and *amour propre*.

(3) Devotion.

The force which maintains cohesion and coöperation is, as we will see further, *discipline*, but in our times, when the soldier is frequently isolated, his devotion is a quality absolutely necessary. The details of modern war, the rapid fire and long ranges, the employment of the terrain, open order, the immense extent of the field of battle, will demand of soldiers individual acts of gallantry and judgment and sacrifice without limit; but at the same time, opportunities are more common to seek personal safety, if one is inclined more that way than toward the accomplishment of some military success.

In order that a man may not take advantage of the absence of his superior officer and that he may risk his life of his own accord, constantly considerate of his commander's wishes, without ever seeing him, it is essential that he be animated by a strong sense of devotion and affection for his leaders. To inspire such affection, therefore, in his subordinates is a necessary study for a military leader, for in this way only can isolated individuals be rendered capable of the most faithful service, of dying gladly as did the Old Guard at Waterloo, crying "Long live the Emperor!"

Familiarity with War.

Familiarity with War and Those Sentiments which Prove Effective in the Case of the Soldier.—The soldier should have a certain taste of hardship in order that in time of war he will be in his proper element.

The instrument of war being the gun, and the gun being intended to disable his enemy, the soldier should not be affected by a false sense of compassion for his opponent. He should be, on the other hand, anxious to wound him, derive pleasure from striking him. But only by habit can he acquire such instincts. The habit ends by rendering the man capable of a restraint which at first would have seemed insupportable. "When our sympathies are often exercised they become less and less sensitive under similar conditions and there results a genuine moral callosity." (Spencer, Psychology, p. 598.)

For this reason the ancients, who fought often, developed a most ferocious character and were better trained for hand-to-hand combats. If a modern army should attack a body of barbarians of equal numbers, the great majority of the former would decline the contest and the present day leaders could not count upon their men. This has been lately demonstrated during the Abyssinian War, where the Italians, advancing too far, found themselves surrounded by the Abyssinians, and at such close range that they could not make free use of their arms and were decimated at every turn.

Fortunately, modern armies, as a rule, decide the issue of combat at long ranges. They rarely engage at close quarters, but when such a contingency arises, the combatants are in a state of subconsciousness, in which they take no account of their actions nor consider what they should do. Arrived at this state, warriors pay no attention to any person but the enemy. Like unto a drowning man, who strains to the utmost all his members, without order or method, with the sole hope of escape from the water, so the combatants struggle, striking right and left, to the rear and to the front, with the one hope of driving back their enemies and escaping themselves. In this delirium of carnage, the officer with elegant manners and the simple peasant, the recruit, the untrained soldier, and the experienced veteran are equally absorbed.

Certainly the civilized may be at a disadvantage, when pitted against the savage, in such a warfare, but the absence of constant experience and civilization do not render man totally incapable of fighting and killing; this faculty is inherent in man, and Barboste, in his attempt to explain the murderous instinct of the individual, gives the following deduction: "Researches seem to indicate a primordial disposition to homicide, a sort of instinctive fury, dark attributes of humanity finding a powerful auxiliary in his imitativeness."

Man, then, retains unfortunately a primitive instinct of cruelty, which reveals itself under certain circumstances and of which revolutions give us the most definite illustration.

In battle, the psychical processes which develop are practically the same; the passions are aroused and on one side the instinct of self-defense; on the other, the sounds, the sight of blood, the dash of the leaders, the imitative instinct and, finally, even in men of most peaceable disposition, the homicidal tendency.

As we have explained, the habit of war gives a certain superiority to the trained veteran. We often listen to the grizzled veteran describing his battles and detailing with evident pleasure cruel incidents in his campaigns. But it is wrong to conclude that we are in the presence of a man devoid of all sense of pity, for one can be a good soldier and still possess a tender heart. In fact, habit can harden in us one sentiment, leaving other virtues intact. I have known a superior officer with the most extreme severity toward his

subordinates to possess the tenderest of hearts. It is a common belief that the soldier, training his will more than others, can always display his self-control outside of the service, and is, therefore, less subject to demoralizing influences. But such a soldier is an ideal not yet reached. The military institution demands that its officers always maintain a firm will, not only during their service but even in their private life, and the laws and regulations are frequently framed to carry out this principle with extreme severity. For instance, the law concerning the marriage of soldiers, and particularly with reference to illegal liaisons, are but means intended to harden the heart of the officer and maintain his reason free from diverting entanglements. But, in spite of all, either because these measures have not been applied with all rigor, or because the affections are too inherent in man's soul to be thus suppressed, the result is far from what was hoped. Above all attributes which bears good fruit in the education of the soldier, is the inculcation of punctuality and system.

Military Duty.

Before concluding the individual psychology of the soldier, we will pause for a moment to consider military duty, which constitutes another moral sentiment.

Military duty comprehends all those qualities whose cardinal principles are obedience and submission.

If we wish to impress indelibly on the heart of man the proper sense of duty, we should appeal to him as he really is, not as we would wish him to be, regarding him through the prism of idealism. It is only in this way that efforts made to develop a notion of duty will carry good fruits.

To obtain good results we must have recourse to a series of practical educational formulæ which, according to our ideas, might be as follows:

(1) *Instruction in the History of the People.*—This is one of the most potent means of exciting the lottier sentiments. The narration of heroic deeds and praise of the heroes exercise an influence analogous to that of the press upon the readers; for example, we know that the description of suicides in the daily papers often excites in their readers an impulse to imitate these unfortunates. In a similar manner, the recital of the heroic deeds of history stimulates heroism in the soldier's heart.

(2) *Celebration of Famous Historical Events.*—By this means, we emerge somewhat from the commonplace views of life in our efforts to appeal to the heart and imagination. In 1900, Gen. Arion, commanding the army corps at Bucharest, issued a most happy order to encourage this custom.

(3) *Example* is the most powerful of all educational means, and the superior should have this constantly in mind, if he desires to impress upon his subordinates the proper sense of duty. When the Lieutenant sees the Colonel address his General in regulation manner with his hand to his cap, he receives the best lesson possible of the manner in which he must himself address his Captain.

(4) *Severity of Punishments.*—The man who is not a soldier cannot become one, except by an energetic action from without upon his intelligence and his will. It is very well if the man finds in his own conscience comfort and support from the difficulties of war; but for him deprived of the virtue, rigid measures must be

adopted to guarantee his performance of duty, by placing him, for example, in the presence of an enemy with the alternative of *certain* dishonorable death or to possibly die gloriously.

An excellent work edited by M. Lieut.-Commander Bolescu prompts us to pause for a moment to consider the question of "conflict of duty." In this work, which is entitled "Morale and Military Discipline," the author lays down the following axiom: "Among several classes of duties the importance of any duties is relative to the extent of the class to which those duties pertain; for example, we would say: I owe more to humanity than to my country, more to my native land than my family, more to the family than my friends, more to my friends than to myself."

But at the same time, this writer acknowledges that the gravest errors of socialism, the greatest excesses of despotism can emanate from this rule. The work of Bolescu is admirable as a sort of basis to work upon and indicates a talented writer, but this question is left in suspense and one does not know exactly what rule should be finally adopted. It is a difficult question, for one class will claim that internationalism has a prior claim to egoism. One class is as numerous as the other, while the soldier would offend should he adopt either maxim.

(To Be Continued.)

WHAT LESSONS CAN WE DRAW FROM THE BOER WAR FOR OUR INFANTRY ATTACK?*

By Lieut.-Colonel von Lindenau, German Army.

(Translated for M. S. I. by Capt. Carl Reichmann, U. S. A.)

I ATTACH no credence to the assertion sometimes heard that the British stated, after the event, that they were using our system of attack, in order to lessen the degree of their defeats and to counter effectually the criticisms of the German press. From all I have been able to learn, I have come to the conclusion that such British statements were made in good faith.

It should also be pointed out that the "Military Considerations of the War in South Africa," which, at the time, attracted a good deal of attention in our army, strongly confirm the views of those British writers who had called attention to the great similarity between the British and German systems of attack. In one place in the "Considerations" it is stated: "The British infantry deployed under the fire of its artillery much like our infantry in our peace manœuvres." At another place it is stated: "The principle of action, therefore, very much resembled ours." Thus the existence of points of similarity cannot be denied.

The battles of Magersfontein and Colenso and the actions at Spionkop, which I have selected to illustrate the points of similarity and at the same time to investigate how far the British carried out their own regimentary formations, seem to me particularly instructive, and attention is invited to the enclosed sketches of the same. The discussion of these actions I consider the more instructive as it

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was from these first heavy conflicts that the British drew the lessons which brought about the use of suitable tactical forms under Lord Roberts.

9. Selection of the Direction of Attack.

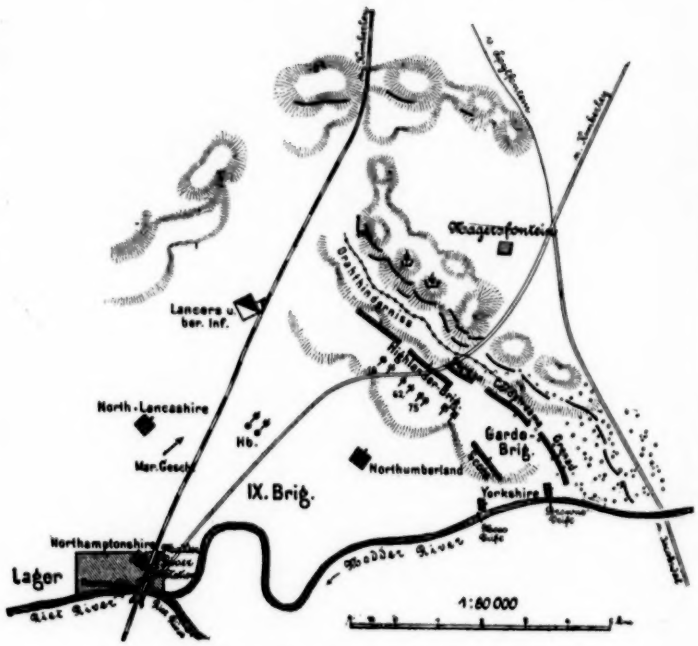
A glance at the sketches will show that the three examples selected represent frontal actions pure and simple. They began as such and were carried out as such from beginning to end. In the days preceding the battles, there is nowhere a sign of an attempt to gain by manœuvreing better tactical advantages than those of a purely frontal attack. Nowhere do we see an endeavor to keep the troops divided while approaching the enemy, in order to establish a proper correlation between front and flank. Nowhere do we find Moltke's idea carried out of uniting the troops only at the decisive moment of the battle in order to develop from a concentric approach the highest type of converging attack.

Severe criticism in all languages of the world has been lavished on the British leaders for these sins of omission. Still, I am inclined to believe that there was no sin of omission. The British leaders, though fully aware of the advantages accruing from overlapping, or flank attack, decided upon the frontal attack because, in view of all the circumstances, they considered it the best road to success. On account of the peculiar tactics of the Boers, it must be conceded that it was most difficult to reach their flanks. When their front proved too short, the Boers simply mounted their horses and extended their flank. That they could not do without weakening the extensive and thinly occupied front. To pierce it at some point by frontal attack with a concentrated force was not a bad idea. Modern arms, however, render the execution more difficult than formerly.

The long range of these new arms, and the increase of their fire to the highest degree of rapidity in a very brief space of time, singularly favor a concentration of fire effect. Their cross fire covers the intervals opening between troops advancing to front and flank attack, and breaks down a counter attack much sooner than formerly. Any movement from a central position becomes a very difficult task, and to pierce the centre of the line by frontal attack presents, beyond doubt, greater difficulties than formerly.

The extreme flanks seemed to promise better success. Yet, in considering the battlefields of Magersfontein, Colenso and Spionkop, from that point of view, we fail to note many advantages on the extreme flanks. At Magersfontein the left flank rests on the Modder River and the right flank is accessible only by the depression in which the railroad ascends to Kimberley. This depression can be covered with effective fire from the hills to the east and west of the railroad, and an advance here was, therefore, to be avoided. At Spionkop both flanks are very strong, the right flank resting on Taba Myama, the left on Kranz Kloof. The chances of turning Taba Myama by way of Acton Homes were, however, not so bad, and were duly taken into consideration on the part of the British. At Colenso it seems proper to ask whether it would not have been best to take first Hlangwane Hill, on the extreme left, since from it the entire position of the enemy could be flanked. It would also have formed a fine *point d'appui* for crossing the Tugela and for further advance. Its capture could not have been difficult, because the troops holding it were detached and cut off by the Tugela from the position on the other bank. There existed, therefore, reasons for attacking wing

BIRDS-EYE VIEW.



SKETCH OF THE BATTLE NEAR MAGERSFONTEIN.
Position Dec. 11, 1899, about 1 P.M.

and flank both at Colenso and at Taba Myama, but these reasons were not sufficiently strong. In view of the Boer tactics, the frontal attack was, therefore, not so objectionable as is generally assumed. In saying so, however, no account is taken of the question whether the desired result might not have been more quickly gained in another way by manœuvreing.

10. The Course of the Frontal Attack.

We will now consider how the British carried out the frontal attack in these three battles, beginning with

MAGERSFONTEIN.

In advancing from the Orange River to the relief of Kimberley, Lord Methuen had crossed the river November 28, not without severe actions at Belmont, Enslin, and on the Modder River. Cronje fell back with his Boers to a position at Magersfontein (see sketch), which was well chosen and skillfully strengthened. It could not be seen into from the side of the British. Since they remained quietly in their camp on the Modder River from November 28 to December 9, they had ample time to reconnoitre the position, which was then ten kilometers distant, but they neglected to utilize this time. They failed to locate either the front line of the position, or the flanks, although sufficient cavalry and a balloon detachment were available. On the 9th, the position was bombarded at long range by a naval gun, without result, and at 2 P. M. on December 10th, Methuen advanced. After marching three kilometers, the British received fire from some advanced Boer posts, and the entire artillery was now brought into action, and the ridge (see sketch) on which the enemy's position was supposed to be was bombarded until dusk. The Boers did not reply to this fire, and kept perfectly quiet. At 12:30 A. M. on the night from December 10th to 11th, the British again advanced. The intention was to march during the darkness in double column, closed in mass, the guides on the flanks connected by ropes, and to deploy at dawn, which was expected at 3.25 A. M. The Highland Brigade marched directly on the salient ridge, thinking it was the left flank. In rear came the Gordon battalion, which was not brigaded, and the Brigade of Guards followed the Highland Brigade on the right, in echelon. The 9th Brigade was to take Moss and Brown's Drifts, and to cover the train. The advance of the Highlanders was at first successful, and they passed the wire obstructions. They were just beyond them, and, it is generally conceded, were not more than 300 meters from the foremost trenches at the foot of the hill, when the Boers opened fire, which, in spite of the darkness, was most effective. The Boers were well informed of the British advance, and it is hard to say whether they learned of it through the flashes of lightning of a thunder storm, or through lack of silence in the advance. It is said that the bright flash from an officer's lantern did much to give the enemy warning. It was only when 300 yards from the enemy's position, which had been discovered too late, that the Highlanders attempted to form line and deploy as skirmishers. They died in the attempt. The Highlanders surely are an excellent body of troops. Their officers throughout were men determined to die for their country wherever it might be. They did every thing brave soldiers could do in such a situation. The troops, nevertheless, ran to the rear, and it was only after a long time that the officers succeeded

in rallying them and opening fire. The fire action took place at an average range of 800 meters, and lasted for hours. The officers, by their energy, succeeded several times in getting single companies forward by rushes. The rising and advancing of the officers, their loud calling to the men, and the lack of promptness on the part of the latter in rising, seem to have been the invariable signal for the Boers to concentrate their fire each time on the rushing detachments. In spite of much individual bravery, which even the enemy could not help admiring, the rushes were quickly brought to an end by the great losses and the entire movement came to a standstill.

At dawn, and soon after the Boers opened fire, Methuen brought his artillery in the position marked on the sketch. On the part of the Boers but one gun, a Maxim-Nordenfelt, came at first into action. The British artillery was thus enabled to throw its main strength at once on the enemy's infantry, but failed to subdue its fire in an action lasting three hours. It was quite a long time before the British found out that the left wing of the Boers extended as far as the river, and the Brigade of Guards now advanced against it, throwing out skirmishers and constantly re-enforcing them. Three battalions were gradually deployed in first line for fire action; the fourth, the Scotch, were held in reserve. At first the Brigade gained ground. The Highlanders, on the other hand, made less and less headway, though re-enforced by the Gordons. At 1 P. M. the Boers brought out their guns, and opened on the left flank of the Highlanders from the left, and when groups of Boers also advanced against that flank, the Highlanders again fell back, carrying the Gordons with them. A part of them, however, held out in their position in front of the guns. The British artillery changed position to the right and front in order to support the Brigade of Guards. The howitzers advanced to 2,500, the other batteries to within 1.100 meters of the Boer lines, and remained there in action, with the Brigade of Guards, until dusk. As the Boers were constantly extending their left, and as several bodies of Boers advanced in the direction of Brown's Drift, half of the Yorkshires were sent forward to support the extreme right of the Guards. At the end of the battle the Scots, nearly the entire 9th Brigade, and the mounted infantry were still intact. Of 13 battalions, but 8 1-2 had been engaged. Methuen, so well known to German officers as a cool and excellent officer, nevertheless gave up the fight and fell back.

Buller's action at Colenso was precisely the same.

COLENSO.

In order to relieve Ladysmith, it was necessary for Buller to force the passage of the Tugela. The Boers under Louis Botha were well informed of the British march from Frere, they withdrew their detachments from the further bank and occupied and fortified the exceedingly strong position marked in the sketch. They also destroyed the railway bridge. By the 12th of December all the British forces designated for the attack were closely concentrated in the camp of Chiveley. Such points of the Boer position as could be clearly made out were bombarded by eight naval guns on December 13 and 14, without interruption. The position of these naval guns is marked in the sketch. The Boers neither replied to this fire, nor did they man the position; with the exception of a few lookouts, they remained quietly in their camps under the cover of the hills. This led some British generals to believe that the Boers did not con-

template an obstinate defense of the position. General Clery issued a detailed order for the attack, which was approved by General Buller. Though form and arrangement of the order somewhat resemble our own, the majority of German officers will probably agree that the order is altogether too lengthy. The order also deals with matters too distant. The intention was to secure the passage of the Tugela, but the third paragraph already deals with measures to be taken after the passage of the river. Moreover, the order disperses the troops too much to admit of their prompt and combined use at one weak point in the enemy's line that might be developed.

The order reads as follows:

(The wording of this order is taken from Captain Slocum's official report.—*Translator.*)

CHIVELEY, *December* 14, 1899—10 P. M.

1. The enemy is entrenched in the kopjes north of the Colenso Bridge. One large camp is reported to be near the Ladysmith road about five miles northwest of Colenso. Another large camp is reported in the hills which lie north of the Tugela in a northwesterly direction from Hlangwane Hill.

2. It is the intention of the general officer commanding to force the passage of the Tugela to-morrow.

3. The 5th Brigade will move from its present camping ground at 4.30 A. M. and march toward Bridle Drift immediately west of the junction of Dornkop Spruit and the Tugela. The brigade will cross at this point, and after crossing, move along the left bank of the river toward the kopjes north of the Iron Bridge.

4. The 2nd Brigade will move from its present camping ground at 4.30 A. M., and, passing south of the present camping ground of No. 2 divisional troops, will march in the direction of the Iron Bridge at Colenso. The brigade will cross at this point and gain possession of the kopjes north of the Iron Bridge.

5. The 4th Brigade will advance at 4.30 A. M. to a point between Bridle Drift and the railway, so that it can support either the 5th or 2nd Brigade.

6. The 6th Brigade (less a half battalion escort to baggage) will move at 4 A. M. east of the railway in the direction of Hlangwane Hill to a position where it can protect the right flank of the 2nd Brigade, and, if necessary, support it or the mounted troops referred to as moving toward Hlangwane Hill.

7. The officer commanding mounted brigade will move at 4 A. M. with a force of 1,000 men and one battery of No. 1 brigade division in the direction of Hlangwane Hill; he will cover the right flank of the general movement, and will endeavor to take up a position on Hlangwane Hill, whence he will enfilade the kopjes north of the Iron Bridge. The officer commanding mounted troops will also detail two forces of 300 and 500 men to cover the right and left flank respectively, and protect the baggage.

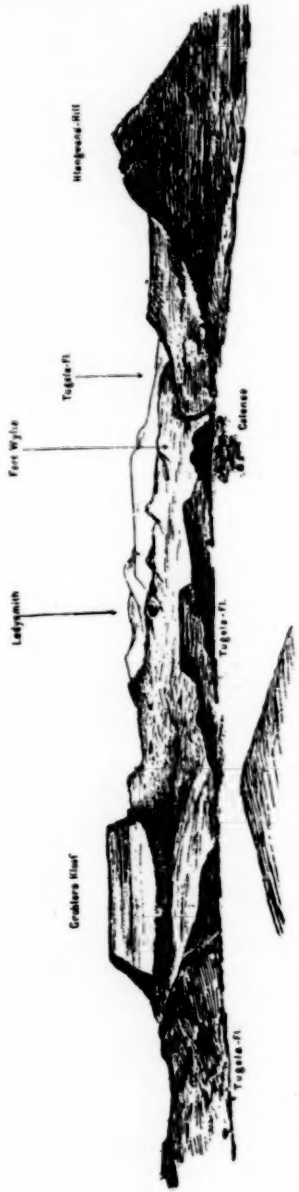
8. The 2nd Brigade Division, R. F. A., will move at 4.30 A. M., following the 4th Brigade, and take up a position whence it can enfilade the kopjes north of the Iron Bridge. This brigade division will act on any orders from Major-General Hart.

The six naval guns (two 4.7 inch and four 12-pounders) now in position north of the 4th Brigade will advance on the right of the 2nd Brigade Division, R. F. A.

No. 1 Brigade Division, R. F. A. (less one battery detached with mounted brigade) will move at 3.30 A. M. east of the railway and proceed under cover of the 6th Brigade to a point from which it can prepare the crossing for the 2nd Brigade.

The six naval guns now encamped with No. 2 divisional troops will accompany and act with this brigade division.

9. As soon as the troops mentioned in the preceding paragraphs have moved to their positions, the remaining units and the baggage will be parked in deep formation facing north in five separate lines in rear of to-day's



SKETCH OF THE POSITION OF THE BOERS AT COLENSO.
As seen from the English side.

artillery positions, the right of each line resting on the railway. (Here follow instructions for the train, baggage, etc.)

10. The position of the general officer commanding will be near the 4.7-inch guns.

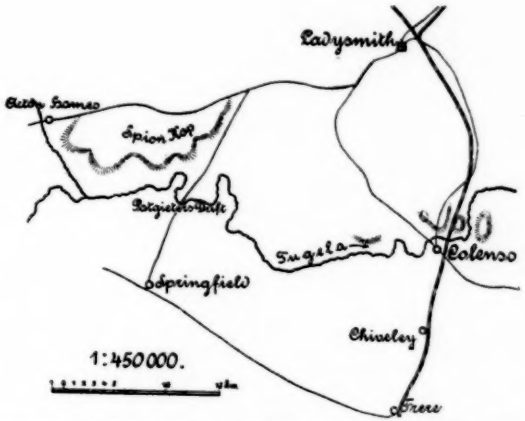
The C. R. E. will send two sections 17th Company R. E. with the 5th Brigade, and one section and headquarters with the 2nd Brigade.

11. Each infantry soldier will carry 150 rounds on his person, the ammunition now carried in the ox wagons of regimental transport being distributed. Infantry great coats will be carried in two ox wagons of regimental transport if Brigadiers so wish; other stores will not be placed in these wagons.

12. The G. O. C., 6th Brigade, will detail a half battalion as baggage guard. The two naval guns now in position immediately south of headquarters camp will move at 5 A. M. to the position now occupied by the 4.7-inch guns.

By order:

(Signed) B. HAMILTON,
Colonel, A. A. G.,
South Natal Field Force.



BIRDS-EYE VIEW OF THE BATTLE GROUND ON TUGELA RIVER.

Pursuant to this order the brigades detailed in first line advanced, on the 15th of December, in a most careless way, the second brigade toward the crossing at Colenso, the fifth toward Bridle Drift, these two crossings being more than five kilometers distant from each other. The fifth brigade advanced without skirmishers in front in the exact formation marked on the sketch, the leading battalion (eight companies) in line of companies in column of fours. We note here that the British battalion has eight companies. The remaining battalions followed in column of companies. The brigade, thus closed in mass, arrived within 500 meters of the Tugela before it received the first shrapnel. At the same moment a severe small-arms fire opened from the trenches in front. The battalions formed line within one hundred meters distance and rushed down to the Tugela. There, however, they failed to find Bridle Drift, which was stated to be immediately west of the mouth of Dornkop Spruit. Part of the first line jumped

into the Tugela to swim across, became entangled in the wire obstructions in the water, and were drowned. The remainder of the first battalion opened fire. General Hart ordered the three rear battalions to change direction eastward, thinking the ford was further east, while others state that the ford had disappeared in consequence of dams constructed by the Boers. Here the troops found themselves crowded in a bend of the river, and, as it was impossible to advance further, they opened a hot but ineffective fire on the well-covered Boers. It is to be noted here that, contrary to regulations, individual fire only was used, and that not a single volley was delivered.

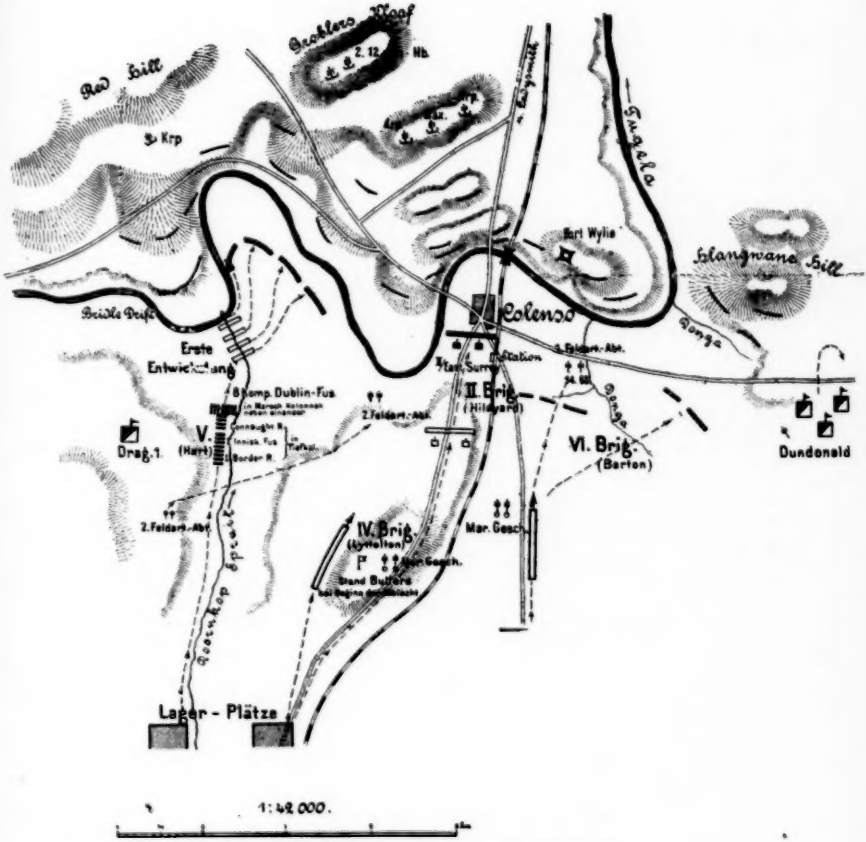
Recognizing the dangerous position of the 5th Brigade, shut up in the bend of the river, General Hart gave orders for the Brigade to retire. The two rear battalions were soon extricated, but the two leading battalions received their orders much later, and continued the action for several hours. Three companies of the Connaught Rangers received no orders at all. They engaged the enemy until noon, and the greater part of them were captured.

The advance of the 2nd Brigade, under General Hildyard, displayed more tactical skill than General Hart's attack. It threw out a strong skirmish line at once, followed by supports, and by the 2nd Battalion of the East Surrey Regiment as general reserve. The Brigade, however, numbered but three battalions, as the second battalion of the West Yorkshire Regiment remained during the battle at Frere, to cover the line of communications. The Brigade advanced west of the railroad in the direction of Colenso; at 800 meters from the Tugela it received a heavy fire, and replied to it. On the right of the 2nd Brigade, portions of the 6th Brigade, up to now in reserve, took part in the action. Another part of the 6th Brigade had deployed against Hlangwane Hill, to cover the attack on Colenso, which was making headway, in spite of heavy losses. Now happened an accident which proved fatal. Covered by the 6th Brigade, the 14th and 66th Batteries of the 1st Field Artillery Division, under Colonel Long, were to support the attack of the 2nd Brigade, and co-operate, with six naval guns; these two batteries came now suddenly in position on the right of the skirmish line deployed against Colenso. Their distance from the river was but 600 meters. The enemy at once concentrated his fire on these two batteries and silenced them quickly. The greater part of the men were killed, the rest sought shelter in the nearest Donga. Colonel Long was severely wounded.

General Buller erroneously believed that the six naval guns, which were to coöperate with the batteries, had been involved in the catastrophe of the 14th and 66th Batteries. He immediately gave up hope to force the passage of the Tugela, although the entire 4th Brigade and one-half of the 6th were intact, and but 9 1-2 out of 16 1-2 battalions had been engaged.

Though just at this time the state of the action was not at all favorable, the possibility of success still remained, in spite of the errors made, provided the intact troops were employed with energy.

The victory could not be gained, however, unless the leader controlled the attack. This would have required Buller to remain behind the front. Instead, he repaired to the front line, to the imperiled guns, and allowed the misfortune that befell them to influence him directly; in this way he acquired his pessimistic view of the state of the battle.



SKETCH OF THE BATTLE NEAR COLENSO.
Dec. 15. 1899.

His subsequent orders aimed at the one end of saving the guns. Hildyard's Brigade had reached Colenso station when orders were received to continue the advance on Colenso with one battalion without becoming seriously engaged, and to dispatch two battalions toward the imperiled guns. Notwithstanding the great bravery of these two battalions, and of individual companies of the 6th Brigade, and also of the 7th Battery, which was attached to Dundonald and brought up three limbers with horses, and despite the heroic attempts of individual officers, but two guns could be saved; ten remained and fell into the hands of the Boers.

At 10.30 A. M. Buller issued orders for a general retreat, covered by parts of the 4th Brigade. General Buller's official report does not give full information of the doings of the 4th Brigade; it is not likely that it was engaged, except in the last stage of the action, otherwise its losses would have been more severe; but three men were wounded on that day. The action of the 4th Brigade was probably limited to covering the retreat.

Dundonald had detached from his mounted troops the 1st Dragoons to cover the left. He himself, with 1,000 men and the 7th Field Battery, advanced against Hlangwane Hill, received promptly an effective fire, and did not attack the hill, as it was a hopeless undertaking. Four of his guns took part in the action at Colenso. The British retreated in good order to their camps near Colenso, as the Boers did not pursue. Through the premature cessation of the attack, the tactical decision at Colenso had become a reconnaissance in force. It took Buller twenty-five days to prepare for his next attempt for the relief of Ladysmith. This led to the actions at

SPIONKOP.

From Chiveley Buller marched off to the left and went into camp at Springfield, intending this time to cross the Tugela higher up. Lyttleton's Brigade advanced on Potgieter's Drift, crossed there, and occupied One Tree Hill. The main body, under Warren, crossed the Tugela on a pontoon bridge laid near Trichard's Drift, and occupied the heights of Venter Spruit. The Boers occupied the heights from Kranz Kloof to Taba Myama, and did not oppose the crossing of the British. General Warren was charged by Buller with the attack on the Boer position, and received confidential instructions recommending that he refuse his right and advance with his left. On January 19 Lyttleton, on the right, made an unsuccessful attack on the Brackfontein Heights, and Warren's attempt to push two brigades to Acton Homes was frustrated by the fire of the Boer artillery. On January 20 Clery, with Woodgate's and Hart's Brigades, and six batteries, attacked Taba Myama and seized its southern rim after twelve hours' fighting, but a strongly entrenched position on the plateau put a stop to any further advance.

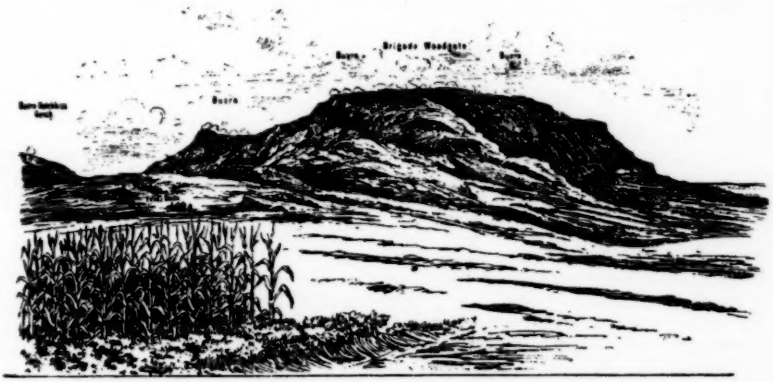
Lyttleton, on the right, renewed his attack on the Brackfontein heights, and was again repulsed; he thought he had gained the superiority of fire, but he was soon undeceived. In all these attacks the British strictly carried out their regulations. It should be noted here that the dense skirmish lines were followed by supports; where entire companies were deployed, they were followed by the remaining companies of the same battalion in close order, and these latter companies, while advancing, suffered the greatest losses.

The foremost lines engaged in fire action were in all of these conflicts 800 to 1,000 meters from the enemy.

On January 21, the battle of Taba Myama continued, without result, and was rendered more and more hazardous as the Boers constantly extended their right. Warren now decided to attack Spionkop.

The Spionkop is much higher than Taba Myama, and rises like a tower over the Brackfontein heights. It is the key of the position. If it were taken, the enemy's position became untenable. The level summit of the mountain is triangular in outline, the most acute of three angles pointing southwestward. Here the plateau is very narrow and unfavorable for the deployment of attacking troops. At this point the slopes are less steep than at any other, still their ascent is most toilsome.

After a rather ineffective artillery fire on January 23, the 2nd Battalion of the Lancashire Fusiliers, the 2nd Battalion of the Lancasters, and two companies of the Connaught Rangers, with 200 mounted infantry and half an engineer company, under General Woodgate, ascended the mountain on the night from January 23 to 24 in single file, with much toil and perseverance, the Imperial Light



VIEW OF THE POSITION OF THE BOERS AT SPIONKOP.
As seen from the English side.

Infantry following as far as the foot. At 3 A. M. these troops reached the southwest angle of the plateau, overran the small posts of the enemy and their two first lines of defense, and at 4 A. M. were in possession of all the southern portion of the plateau. Here they entrenched themselves.

The Boers continued to bring up re-enforcements from other parts of their position, and from Ladysmith and Colenso, and at 8 A.M. advanced to the counter attack in small groups of from three to fifteen men, taking every advantage of natural cover. During their advance they maintained a steady, well-aimed fire. Whenever the British fire became too hot, the greater part of the Boers threw themselves flat on the ground and waited. Only one man in each group kept a lookout, but all had their rifles ready, and took aim, fired, and lay down again with lightning rapidity. The Boer here proved himself a good skirmisher and splendid marksman, able to pick up quickly small objectives like head targets. A free life in God's open nature, and his hunting habits, had made him a better skirmisher

than we can produce in two years' service. Their attack was supported by two Maxim-Nordenfelts on Spionkop, and by some guns on Taba Mayama. Still the conflict fluctuated with varying success.

At 10 A. M. Colonel Crofton heliographed to Warren for immediate re-enforcements, or all would be lost, and that General Woodgate was killed. Warren replied that he was sending the Middlesex and Dorsetshire battalions, that the Imperial Infantry was on its way up, that he must hold out to the last and not give way. After several changes, the command on Spionkop devolved on Lieutenant-Colonel Thorneycroft. At 11 A. M. the re-enforcements reached the summit, where there were now 5 1-2 battalions. The Boer attack came to a standstill, but they maintained an effective fire, to which the British could not sufficiently reply on account of lack of room for deployment.

On the right, General Lyttleton renewed his attack on the Brackfontein Heights on the 24th. When he received, direct from Spion kop, a request for re-enforcements, he misjudged the situation and took the request too verbatim. Instead of attacking with all his troops, and, by means of a sharp attack, preventing further re-enforcements from reaching the Boers on Spionkop, he dispatched the Scotch Rifles and the King's Royal Rifles to Spionkop. The former took the path the other troops had used, the latter missed it, and ascended from the east side. On account of the almost vertical slopes, the ascent was very difficult, being in a dead angle. The battalion reached the summit in spite of a severe fire, but could get no further. At 5.15 P. M. they reached the top, so that now 7 1-2 battalions were crowded together in a space which, in the early morning, had proved too small for 2 1-2 battalions. Some troops sought shelter on the slopes, but were searched out by the fire of the Maxims. Many were thrown into confusion, and all suffered from lack of water.

This crowding in a space insufficient for deployment reminds one of the 43 companies at St. Hubert in the battle of Gravelotte, on August 18, 1870. Just as there, under the stress of battle, all re-enforcements were sent straight to the front, and no one seemed to have the presence of mind to give the command "half right, march"—down they rushed to the Mance, across the bottom and up to the heights of Point du Jour—so at Spionkop the troops were diverted from the proper direction and densely massed on a narrow mountain top.

Warren thought that the mountain might be held if he could get guns to the top, and ordered the engineers to take two naval guns and the 4th Mountain Battery to the top during the night.

Thorneycroft had been all day on the 24th in the fight on the summit of Spionkop, and knew nothing of these measures. He believed that the mountain could not be held, and ordered the retreat, which began at 8.30 P. M. To-day, with a full understanding, no one will doubt that Warren was right; Thorneycroft, however, had no such extensive knowledge. General Warren is frequently criticised for not going personally to Spionkop. I do not share the opinion that his place as leader was there, as he would have been unable to exercise any control or general supervision. Under the impression of the conflict in his immediate presence, he would have come to the erroneous conclusion that the mountain could not be held, just as Thorneycroft did, whose bravery throughout the day was most conspicuous. By going to Spionkop, Warren would have committed the same error as Buller at Colenso.

It was Warren's fault, however, that for hours there was no com-

munication between him and the troops on Spionkop. When the heliograph failed, it was his duty to establish some other kind of communication, and the omission cost him dearly. It was the duty of the general staff to see that drinking water was taken to Spionkop even faster than the guns, as the troops were greatly suffering from the lack of it. Though thirsty and somewhat shaken, it was nevertheless the duty of the troops to hold out in their crowded position, as did the 43 Prussian companies near St. Hubert, in the battle of Gravelotte. They held out in their crowded position from 5 P. M. to the end of the battle. To abandon Spionkop voluntarily was to give the victory away to the enemy, which would certainly not have been the case if the attack on Spionkop had been strongly supported by simultaneous attacks on the flanks.

During the conflicts around Spionkop on January 24, the eight battalions of Hart's and Hildyard's brigades rested quietly in rear of the left. Two battalions of Woodgate's and one of Coke's brigade

SKETCH OF THE BATTLES AT SPIONKOP.

January 19-24, 1900.

were also held in reserve. In all eleven battalions* available for attacking the enemy's flank were not utilized.

It was the lack of support to the main attack that gave the Boers time to bring up re-enforcements from Colenso and Ladysmith, and that enabled them to make their counter attack at the most effective point, for which, at the most, they could not muster more than the equivalent of a small battalion. No one was in command in this attack; it was made by men spontaneously uniting for the purpose, and their mode of advance by rushing, creeping, and, I might almost say, stalking, is eminently characteristic.

The course of the three battles described shows plainly that, in all three cases, failure was due much more to lack of energy in execution and improper formations than to a failure to give the attack the proper direction.

11. Lack of Energy in Carrying Out the Attack.

The attack once determined upon, the leader must make up his mind to throw his last man into the fight in order to gain the victory. Not until the last reserve has been thrown in without success may the attack be considered a failure. By desisting before that contingency, he gives away the victory; the failure is not due to the means chosen, but to their insufficient use. At Magersfontein 4 1-2 battalions remained intact, 7 at Colenso, and 11 at Spionkop. Expressed in percentages, the following joined in the attack: 65.4 per cent. at Magersfontein, 57.6 per cent. at Colenso, and, on January 24, 46.8 per cent. at Spionkop. At Magersfontein the entire 9th Brigade was frittered away for minor purposes, guarding the baggage and covering the right flank, which was in no danger whatever. At Colenso the 2nd and 5th Brigades alone were used in the beginning of the attack. A small portion, not more than 1,500 men, of the troops held in second line took part to recover the guns lost by the first line, and to cover the retreat. During the actions around Spionkop Barton's brigade remained inactive 50 kilometers from the field. Some portions of it seem to have moved off toward the battlefield; its entire strength, however, should have been brought up after the Boers from Colenso and Ladysmith had hastened to the battlefield, and when serious danger to the communications no longer existed. The greater part of the brigade could have been available on January 20 at the latest. Had the brigade started early on the 21st and marched 17 kilometers per day, every man would have reached the battlefield at the hour when the decision was maturing.

The lack of energy in the execution of the attacks is not manifested by the use of insufficient forces alone. It is further demonstrated by the percentage of losses. They are given on the appended sketches, calculated from the number of British troops present, and amount to 7.4 per cent. at Magersfontein, 5.8 at Colenso, and 7.2 per cent. at Spionkop. In comparison we note here the losses of our infantry at Mars la Tour, which was 25 per cent., and of our infantry of the guard at St. Privat, which was nearly 30 per cent. Taking the troops which suffered most, we find that at Magersfontein the Black

* Some British reports state that two battalions from Barton's brigade at Chiveley reached Lyttleton in time. They did not enter into the action. If these statements are correct, the number of unemployed battalions is increased to thirteen. We leave them out of our calculation because it is not absolutely certain that they arrived in time.

Watch lost 35.2 per cent., and the Seaforth Highlanders 23.4 per cent.; at Colenso the Royal Dublin Fusiliers lost 23.9 per cent., and the Connaught Rangers 16.1 per cent., and the Lancashire Fusiliers 17.2 at Spionkop. Comparing these figures with instances of unusual losses in 1870–71, we may quote the Guard Rifle Battalion at St. Privat with 54 per cent., the 16th Regiment at Mars la Tour with 68 per cent., the 52nd Regiment at Mars la Tour with 52 per cent., the 2nd French Turco Regiment at Woerth, with 86 per cent.

In calculating the percentages of losses I have consulted all official British statements that have been made public and were accessible to me, and that I purposely did not take the missing into consideration. The higher percentages appearing in several works on this war, for instance in the very carefully prepared "La Guerre Sudafricaine, par le Capitain G. Gilbert," may be explained by including the missing, which, for the purposes of my work, I thought best to exclude. On account of various deductions incident to the war, I took the average strength of the British battalions as 800 men.

In his interesting work "On the War in South Africa," Captain Wojcik, of the Austrian General Staff, points out that, previous to the Boer war, it was generally assumed that the attack energy of good troops was exhausted after an average loss of 26 per cent. Part of the British troops reached this figure, or nearly so. Otherwise their losses did not equal those of former bloody battles. In that sense such expressions as "unheard of losses," "enormous losses," etc., are misleading. On the other hand, it should be noted that some of the British losses were incurred in much less time than was the case in former wars. In some cases the greater part of the losses was incurred in a few minutes. The moral effect of the rapid increase of loss in the close formations, or dense skirmish lines, was overpowering. It may, perhaps, be said that this moral effect took place in former battles, too. That may be so; two circumstances, however, have materially added to it: the absence of smoke from the battlefield, and the invisibility of the enemy. Captain von Luttwitz makes special reference to this He says that a British officer mentioned to him the emptiness of the battlefield as the most unpleasant feature of modern battle. That the great distances at which fire was opened gave one a feeling that you were going out to face an invisible foe which you were powerless to combat. That if you were firing at the long ranges, the fire was more or less at random. That the defender fired as soon as you rose and advanced, and that you were yourself unable to see him, and that every rush increased the losses. That soon the moment arrived when any movement, whether to the flank, front or rear, ceased, and that in consequence troops would halt and fire from the same position for hours. Captain von Luttwitz then mentions a case from the battle on the Modder River where the guards lay for twelve hours under the enemy's fire at the same distance of 800 meters. Movements were impossible, no order or ammunition reached the front. After twenty-nine ammunition carriers had been killed, no more ammunition was sent forward.

(TO BE CONTINUED.)

HORSE-BREEDING FOR THE EMPIRE IN CANADA.

By Major-General T. Bland Strange.

(*United Service Magazine*, London.)

THE report on the Remount Department sets forth that, like every department of the War Office, it was made for peace, with no capacity for expansion in war. That there should be a War Office which prepares only for peace is one of the insular peculiarities, which will not tend to the survival of the Empire as one of the fittest.

The suggestions which follow were submitted to the Inspector-General of Remounts, in March, 1901; and somewhat similiar suggestions were submitted to his predecessor nearly twenty years previously, when he visited Canada in his official capacity. "Men may come, and men may go," but W.O. "goes on forever." How long can the British Empire exist contemporaneously with the War Office under existing conditions?

Neither the Remount Department nor the Commission upon it seems to have called for the opinion of anyone personally acquainted with the vast horse-breeding areas of the Empire. The past is gone irrevocably—many millions and many tears with it. The future is before us—will enlightened public opinion, or anyone in authority, consider it in the light of the past? Probably not; yet it should be clear to everyone that the horses needful for a great war could not possibly be obtained from within the British Islands.

I shall try to comment shortly upon the great plains of Alberta in Western Canada, and their suitability for raising the best and hardiest breed of horses for the great new arm of the British Empire, Mounted Infantry. I can best do this by giving an account of my own efforts in that direction.

Having retired from the Royal Artillery in 1881, after thirty years' service, and ten years as Inspector of Artillery in Canada, I had necessarily an intimate knowledge of the Dominion and its horse-providing capacities from the Atlantic to the Pacific. There being at that time no Canadian Pacific Railway further west than a short distance beyond Winnipeg, I followed the Missouri into Western Montana. Purchasing a wagon, a four-horse team and supplies, and associating myself with a young Australian, I prospected from the Canadian border, along the base of the Rocky Mountains north and east, till I eventually selected 70,000 acres of land north of the Bow River, and forty miles southeast of Calgary. I obtained a lease from the Canadian Government for the land, and started the Military Colonization Ranch Co., with Col. Hennel (now of His Majesty's Body Guard) and other comrades. I became resident manager, and bought and drove up from Montana 500 brood broncho mares, obtaining suitable sires. The venture at first proved successful, and the climate and pasture were suitable.

The snowfall is comparatively light, and remains but a short time on the ground in consequence of the prevailing warm winds (Chinook) from the Pacific. Unlike the cloven-footed cattle, the horse, with his solid hoof, can paw away the snow and always find the naturally cured hay into which the summer prairie grass converts itself. No shelter is required but that afforded by the low-lying lands by the woods that fringe the Bow River, which never runs dry or completely freezes, its source being the eternal snow of the Rockies, and its current swift.

The brood mares and foals needed neither hay not stabling, and but little herding after the first year; in fact, they could only with difficulty be driven from the well-pastured uplands and river bottoms where their foals were reared.

The system of breaking in horses carried out by the broncho "buster," as he is termed, is brutal, unsatisfactory, and expensive, but no other was possible at first. The plan of gentling three-year-olds systematically is far preferable, but requires intelligent supervision.

Many horses and cattle ranches sprang up in the neighborhood, but cattle have become their principal product since the British War Office discontinued the purchase of horses in Western Canada. This was brought to pass in 1887, by a combination of the home horse-breeders' association, and the horse dealers putting pressure on the War Office through Parliament. The introduction of electric trams in the cities further lowered the price of horses. But when Riel, in his second revolt, raised the Indians against us, and I was called upon by the Canadian Government to raise scout cavalry, I found no difficulty in raising, from the cowboys of the plains, the best it has ever been my lot to command. Later, they formed the bulk of Strathcona's Horse, and did good service in South Africa, under the same gallant officer who had commanded them as "Steele's Scouts" in the campaign of 1885.

On that occasion one squadron was mounted from the Military Colonization Ranch, and others from neighboring ranches.

The toughness and endurance of these horses far surpassed that of any I have had experience with in war, and I am familiar with English, Irish, Arab, Indian-studbred, Australian, New Zealand, and Cape horses.

No words of mine are needed to point out that the existence of the Empire as an armed military power largely depends upon our utilizing the great natural horse-breeding grounds within our own borders.

Thoughtful people are aware fully that, to effectively meet the sudden calls of war, organization is required in time of peace. With regard to the Canadian portion of the King's Empire, His Majesty's happy and well-timed action in presenting the "King's Color" to the regiment of horse raised by the patriotic foresight of Lord Strathcona, did not, unfortunately, lead to the permanent retention of that useful body of men on the rolls of His Majesty's Canadian Forces; it has been disbanded. Permanent military bodies are apt to become hidebound in useless formalities, unless constantly employed in the military instruction of local militia, or in practical duties, such as the training of horses for mounted corps by mounted corps.

The superintendence of a depot for Mounted Infantry remounts, in the centre of the horse raising plains that extend for 500 miles along the base of the Rocky Mountains, would have been a task for which the officers and men of Canadian Mounted Rifles would be pre-eminently fitted, had their services been retained. Such remounts as were sent in from the surrounding ranches could be annually inspected by Purchasing Officers for the British Army, and sent to England, or any part of the Empire, in shiploads, at the end of the autumn round-up.

It would be advisable to select three-year-olds at the spring round-up, and have them gentled by the ranchers for autumn

transportation by the C. P. Railway to the Atlantic or Pacific coast. In the event of war in the Far East, troops could be sent from England *via* the C. P. Railway to Vancouver, and pick up their remounts *en route*.

The stockyards for entraining horses are at Strathmore, 44 miles from Calgary by rail.

The average price of such horses selected as three-year-olds, fairly broken as four-year-olds, sound, useful horses for Mounted Infantry or Light Cavalry, would be £20 per head or less, and the probable cost of transport to England about £9 per head. The expenses of the selecting officer, and of a small detachment of Western Canadian Mounted Militia to brand, drive, and entrain such horses, would be extra.

From answers given in the English Parliament up to March, 1901, only 3,000 horses had been purchased for South Africa in Canada, and these were collected in midwinter, when the Canadian prairie horse is in his worst condition, and least fitted to endure a sea voyage through the tropics. And again, lately, 5,000 horses have been bought at the end of winter, when the broncho is, if possible, even less fitted for transport through the tropics—such flagrant folly can only be obviated by establishing a remount depot in the horse-rearing region, and having a system of collecting horses in summer. It is for those interested to exert themselves that representation be made through the Canadian to the Imperial Government; but as cowardice (the fear of losing votes) is the principal characteristic of the latter, and as the Colonies have no votes at Westminster, they are not likely to obtain consideration. We accept the men of the Colonies to fight for us, but we buy our horses elsewhere, as we do our meat and other supplies. I am personally familiar with Australasia, as well as India and Canada, in fact, with almost every part of the Empire, and I am sure that nothing will hold its component parts together except common commercial interests—that is, inter-Imperial free trade, and a tax upon all foreign manufactured products, including foreign flour. To the stupid insular Englishman this looks like a question apart from Imperial defence; it is the only foundation for it. Without food there can be no defence. The Gospels of Cobden and Christ have been put on the same footing—neither are allowed to be discussed in these islands.

TROPICAL DISEASES OF ARMY ANIMALS.

By Coleman Nockolds, Veterinarian, 1st Cavalry, U.S.A.

MR. NOCKOLDS writes to the Editor of this Journal from Batangas, P. I., as follows:

"I have the honor to enclose herein a report on tropical diseases of Army animals and their treatment. It is an extract from a report prepared by me in compliance with a request from my regimental commander. Last year the Journal published a short account of some of these diseases; since that time much has been learned by experience as regards diagnosis and treatment. There is nothing in any American textbook regarding diseases of animals peculiar to the tropics, and it was with the view of assisting

officers, veterinary and others concerned, to more readily recognize and successfully handle them that this report was written. It is with the permission of the Adjutant, 1st Cavalry, that I have forwarded it."

Diseases Peculiar to the Tropics are as follows:—

1. Surra.
2. Ulcerative Lymphangitis.
3. Myotic Dermatitis.
4. Tropical Ulcers.
5. Chiber.
6. Barsetti.
7. Land Leeches.
8. Intra-ocular Filariosis.
9. Kamrii.

Diseases Common to Both Tropical and Temperate Climates.

1. Tetanus.
2. Infectious Pan-ophthalmitis.
3. Internal Parasites.
4. Thrushes.
5. Glanders.
6. Quittor.
7. Abscesses.
8. Canker.

Relative Frequency of the More Common Diseases Existing in the Philippines.

1. Surra.
2. Ulcerative Lymphangitis.
3. Tetanus, epidemic.
4. Infectious Pan-ophthalmitis.
5. Myotic Dermatitis.
6. Internal Parasites.
7. Thrushes.
8. Glanders.
9. Tropical Ulcers.
10. Chiber.
11. Quittor.
12. Abscesses.
13. Barsetti.
14. Land Leeches.
15. Intra-ocular Filariosis.
16. Canker.
17. Kamrii.

Tetanus, commonly known as lock-jaw, is caused by a micro-organism (Tetanus Bacillus). It exists in different localities as an epidemic. It occurs more frequently here than in the United States, and causes considerable loss of life, the number of animals dying from the corrals in the Post of Batangas within a year exceeding sixteen. Many horses and mules are attacked by a mild form of this disease and often recover in from six days to two months.

The treatment of severe cases is unsatisfactory. It is of the utmost importance that the animals attacked should be isolated, and kept in a darkened place. Nerve sedatives may be given, but medicinal treatments are but little good.

Infectious Pan-ophthalmitis, Periodic Ophthalmia, Moon Blindness.—Probably more horses are condemned through this disease (for cavalry purposes) than any other. I believe that at least 80 per cent. of native ponies suffer from it; they should not be allowed in corrals where there are American animals. Most of our horses had sound eyes when they left the States; the glare of the electric lights and dust on board transports and the heat and glare of the sun may be predisposing causes, but the actual cause of this disease is a germ. Very few animals recover after once attacked.

When horses are first affected, the application of a solution of Bi-chloride of Mercury or Boracic Acid may be beneficial

A fringe made of leather or cord and attached to the halter and bridle would protect the eyes from insects and light and in that way prove beneficial.

Internal Parasites.—Besides the Trypanosoma Evansi (Surra) and Filaria Papillosa (worm in the eye), which are described later,

the more common worms which affect animals out here are the Spiroptera Megastoma, worms measuring 7 mm. to 12 mm. in length, white body, attenuated at both extremities, and constricted neck, found in the stomach of the horse embedded in small tumors, ranging in size from a pea to an egg (uncommon).

Spiroptera Microstoma: worms measuring 10 mm. to 17 mm. in length, white body, tapering at both ends, no constriction at neck; very often myriads can be seen amongst the food in the stomach; if the contents of the stomach is watched for a short time they apparently move in an undulating manner; this is due to the worms which can be seen upon closer examination. I have often noticed these parasites in large numbers in the stomach of animals affected with "Surra."

Ascaris Megalocephala: 15 cm. to 30 cm. in length, yellowish-white and rigid, distinct head, two small membranous wings on tail, found in the small intestines of horse and mule (very common).

Oxyuris Curvula: 40 mm. to 50 mm. in length, smaller at one end than the other, found in the large intestines.

Oxyuris Mastegodes: Slightly longer in body and tail than above; these parasites are commonly called pin worms. Although living in the large intestines they frequently leave them and fix themselves to the mucous membrane of the rectum.

Sclerostoma Equinum: 18 mm. to 35 mm. in length, gray shaded with red, anterior portion straight and rigid and broader than the posterior part; infest the cæcum (blind gut) and commencement of the large colon, often found hanging to the mucous membrane of the large intestines (very common). Most of these parasites can be gotten rid of by a dose or two of santonin given on successive days, followed by a dose of physic or arsenous acid Gm. 2, each day for ten days; or tartar emetic Gm. 15 to 20, given Gm. 5 at each dose every three hours. Pin worms by injections per rectum of vinegar and water.

The Filaria Papillosa, a small white worm, 6 cm. to 18 cm. in length, is often seen in the peritoneum and on other serous cavities, sometimes gaining entrance to the eye.

Teniæ are not common. I have never noticed one in nearly 200 autopsies.

The larvæ of the Castrophilus (bots) are not as often seen in the stomach of animals here as in the United States.

Thrushes.—Because of the impossibility of keeping horses' feet dry and clean, especially during the wet season, the horny frog is often attacked by fungi; most horses suffer more or less from this condition in the Philippines. Trimming off the diseased horn, cleanliness, plenty of exercise, so that the frog can come in contact with the ground, and dusting the diseased parts with calomel will often cure the worst case of Thrush. To prevent this condition, allow the animal to stand in a dry place, keep the feet clean and shoe so that the frog can come in contact with the ground.

Glanders.—So much has been said of this disease that it is unnecessary for me to dwell upon it. I may state that in my opinion Glanders was brought here by American animals, and that it has not the same tendency to spread in this climate that is so noticeable in the United States; when more than one horse shows evident signs of Glanders, and the injection of mallein shows a typical reaction, and especially if the Mallei Bacilus is demonstrated, diseased animals should be destroyed without delay. Debilitation from any

cause predisposes to Glanders. Farcy, which is Glanders in which external signs are more prominent, must not be mistaken for a common disease out here called Ulcerative Lymphangitis (this has been done).

When once Glanders has appeared in a troop, the following steps should be adopted: Immediate destruction of all infected animals; complete isolation of those which have been in contact with them; thorough disinfection of stable, utensils, fittings, flooring, water troughs, clothing, saddlery, harness, and attendants; destruction of forage and complete disinfection of stables. It must be remembered that the poison of the disease is spread by direct contact with the diseased fluids of sick animals; by water and food soiled by their body fluids; by air containing particles given off from their skins and lungs or carried by the process of evaporation from the infected ground on which they stand: by contact between healthy animals and men who have been attending on the affected ones; by the superficial burial of carcasses and the bringing to the surface through animal agency of the particular poisons of the dead; through placing healthy animals in sheds, stables, corrals, etc., which have been occupied by diseased ones. Discharges from the body should be destroyed by fire, the feces and litter burned, the soil on which the patient has stood disinfected by litter being burned on it, and the ground to the depth of 6 to 12 inches dug up and buried with the carcass; all food which has been under the same roof with the patient should be destroyed by fire; all buckets and metal feeding troughs should be heated strongly; grooming utensils, brushes, cloths, etc., should be burned; clothing should be boiled for several hours; mangers, walls and partitions should be burned by having blazing straw or other material which will give out a good flame passed over them, and then be thoroughly scraped, the scrapings buried with the animals; wood and iron work should then be treated with boiling water containing at least 20 per cent. crude carbolic acid; all doors and windows should be flushed with the same material. If possible to close the building sulphur in the proportion to 50 ounces to every thousand cubic feet of air space should be burned; lastly the walls, doors and all portions of the buildings should be thoroughly painted or whitewashed. To complete these measures, persons that have been in attendance on sick animals should be disinfected; their clothing should be boiled or baked and their bodies washed and disinfected, especial attention being paid to their hands and the nails should be cut short and thoroughly cleaned. Cadavers should be buried deeply in quick-lime, or what is much better, burned.

The daily inspection of all animals is absolutely necessary; of course the greatest difficulty is in obtaining complete isolation of suspected cases, which is so essential in stamping out the disease.

Watering not done from running streams should be given in buckets one per head; each horse should be placed at least fifteen feet apart. An infected troop should not drill or in any way should one of the horses belonging to that troop come in contact with any other horse in the regiment. It should be at least six months after the last case has been noticed before a troop is considered as free from Glanders. Soldiers should always be informed of the infectious and dangerous nature of Glanders.

Quittor.—When it occurs generally takes the type known as cartilaginous, and can only be handled by a competent veterinarian.

Abscesses are common to many diseases, but they occur very frequently in the tropics and apparently from the most trivial causes. Of course it is only necessary for certain micro-organisms to gain entrance to the system and set up the irritation necessary for abscess formation: the starting point is often a slight scratch from a bamboo, wire or other pointed materials. They commonly appear on the breast of a troop horse just below the wind-pipe, but may form in any part. Often in mules used as pack animals, the abscess forms about four inches below a pack sore; these may reach the size of a man's head. They should be opened and thoroughly flushed out with an antiseptic solution, creolin, corrosive sublimate, or carbolic, and good drainage established; often after cleansing, swabbing out with tincture of iodine is good treatment.

Canker is a disease of the foot caused by parasites. It affects the secreting tissues of the foot, beginning at the frog, and is characterized by alterations in the horny structures. Often canker exists for a considerable period before it is first noticed, which will be most probably at the time of shoeing. The frog is soft and moist and the horn separates from the sensitive sole and is replaced by a white fungoid material, upon which is found soft cheesy looking matter. The disease creeps as it were under the horn until finally the whole hoof may be shed. This is a very insidious disease and fortunately rare. The treatment consists of incising the growths, applying acids or the actual cautery (hot iron) and is very unsatisfactory. It should be left in the hands of a qualified veterinarian.

There are other diseases such as Colics, Pneumonia and Laminitis, which are common to both climates and which occasionally occur here, but are very rare excepting perhaps Laminitis (Founder). When troops are on the march, this is chiefly caused by horses losing shoes and continuing to march without them. A mild form of Coryza (common cold) often passes through a troop during the dry months, caused by dust; this rarely needs treatment. Horses on the march, especially if pushed, are sometimes stricken down with over heat; all equipments should be removed and if a stream is near the animal should be led to it and continually bathed with the water, if possible iced water along the spine and on the head; enemata per rectum should be applied; internally a mild stimulant like the Aromatic Spirits of Ammonia should be given in Gm. 30 doses repeated in an hour if necessary.

Wounds and cases of lameness are more common here than in the United States, because the conveniences as regards roads, stables, fittings and corrals are not as good.

Surra.—By far the most serious form from a military and economic point of view. Although military organizations of other countries, especially of England, have suffered enormous losses from this disease, I think that the proportion of losses has been larger in this country than in others. Surra is apparently not a native disease of the Philippine Islands. Although most intelligent native horse owners and one native veterinary surgeon who has been practising in Batangas, P. I., for over twelve years recognize simple œdema they all agree that Surra has arrived within these last three years.

The first case seen by me was in an American horse during January, 1901, and there certainly had not been any other cases of Surra at Batangas during the three months previous. This disease takes the form of a pernicious anæmia; it is caused by a worm-

like parasite, the Trypanasoma Evansi, which attacks and disintegrates the red blood cells, causing a profound anæmia, which results in the death of the patient. As to the habitat of this hæmatozoon nothing definitely is known; it is supposed to exist during one of its phases of life in swampy water, often clinging to the coarse grass which is found in swamps. The natives have a habit of laying grass which they had cut to sell in water to make it weigh more; probably the parasite is moved from place to place and also fed to animals in this way; another phase of its existence is passed in the blood of animals, and it is possible that some cases of "Surra" may be caused by biting flies and other insects taking infected blood from sick animals to healthy ones. "Surra" is not always carried this way, as is proven by the fact that three troops of the 1st Cavalry have been in corrals at Batangas without losing one animal from it, whilst at a short distance a great number of quartermaster animals have been attacked and died; one horse from one of the three troops mentioned was put by mistake into a corral containing "Surra" infected animals and died from the disease. Again the 1st Cavalry transport animals stationed here have lost only two animals from "Surra," whilst the Engineer wagon-train at this post lost over 90 per cent. "Surra" seems to be confined to localities; for instance, the eight troops of 1st Cavalry stationed along the coast have lost less than .44 per cent., whilst in other localities some troops have lost all or 100 per cent. of their horses. With few exceptions animals that have died here from "Surra" contracted it outside. At Bauan, P. I., Troop "K" 1st Cavalry has never lost a horse from "Surra," although a horse brought from the 5th Cavalry, which were stationed in the northern part of the island, was turned in amongst the Troop "K" horses, developed a well-marked case and died. There were a number of transport animals that came to Batangas from China, died here of "Surra." A question arises as to the transmissibility of the disease by flies; if it were so, why were not animals that mixed with "Surra" infected animals attacked?

When American animals, both troop and transport, first arrived here, they were exposed to the inclemencies of the weather; there was no shelter of any kind. The next year, although both troop and transport animals were provided with shelter, in the case of the transport animals it was put up in identically the same place where "Surra" stricken animals had died; in the case of troop animals this was not so. Troop animals I believe receive more care and are more regularly fed than transport animals. I believe "Surra" is taken into the system with infected grass, grain or water. The parasite is easily seen by examining a fresh drop of blood with a one-sixth or higher objective, or by staining it in specimens of dried blood. This disease is easily recognized by its symptoms.

First an increasing weakness is observed; the animal lags at work and soon is unable to keep up with the other animals in the team or troop; there is a general unthrifty, anxious look about the animal; the limbs, belly, sheath or side of the vulvæ swells; this swelling is doughy to the touch and not painful; the mucous membranes of the nose, mouth and eyes are extremely pale or yellowish; claret colored spots can be seen upon the membrana netitans (Haw) of the eye. There are well-marked paroxysms of fever and pain, with intervals of comparative ease; the temperature during the paroxysms may reach as high as 41 degrees Centigrade; the animal

lies down a good deal, and often towards the last, whilst trying to arise, falls and breaks the skin over the knees and fetlocks, sometimes exposing the bones; the joints knuckle and rapid waste of flesh occur; there may be a dribbling of urine and a slight discharge from the nostrils, but this is not characteristic. Opacity of the cornea with complete blindness occurs in the proportion of one to sixty. The appetite is either normal or ravenous, the animal eating even whilst dying; rarely the appetite falls off. This disease runs a chronic course, sometimes lasting three months before patient succumbs.

The mortality if not treated is 100 per cent. of animals attacked.

Treatment is not of much avail, but some animals have returned to duty after being treated according to Lingard's plan with arsenic combined with iron and quinine.

It is to be hoped that in the near future some plan of treatment or prevention will be discovered that will be successful.

At present the rules laid down for the stamping out of glanders, combined with good care, shelter and feeding American hay and oats are the methods which will give best results in lessening the number of animals attacked by this disease.

The following percentage of deaths occurred at this post during one year, August, 1901, to August, 1902:—

Brigade	3.6	per cent.
Corps of Engineers	90.	per cent.
1st Cavalry	.407	per cent.

I believe that other outfits, especially the 9th, 6th and 5th Cavalry, had enormous losses, some troops losing as high as 100 per cent.

(TO BE CONTINUED.)

THE VOYAGE OF THE "CHARMING NANCY," 1776.

BY COLONEL F. A. WHINYATES, LATE R.H.A.

(*Journal Royal, U. S. Institution.*)

DURING the American War of Independence an Army under General Burgoyne, in the spring of 1776, was sent from England to Canada with the object of driving the rebels from that Province, and moving down the River Hudson to co-operate with the British troops in the neighborhood of New York under the command of General Sir William Howe. Six companies of Royal Artillery accompanied Burgoyne's force, and one of them, under Major Griffith Williams, made the voyage across the Atlantic in the Ordnance transport, the "Charming Nancy." The officers on board, by mutual consent, drew up a code of rules for observance during the passage. They are written in a little paper-covered book, at the other end of which is the diary of the voyage to the St. Lawrence in 1776. The cover is signed "George Williams, 27th March, 1776," and gives the routine account of

weather at sea in April and May, 1776. On 30th May, the transport made the Island of Bic in the mouth of the St. Lawrence.

The rules referred to, which are both quaint and amusing, may be of interest to readers of the *Journal*, and run as follows:—

Regulations of the United Assembly on board the "Charming Nancy," 3d April, 1776:

The United Members of this Assembly hereby severally enter into a solemn engagement to forget and bury in eternal oblivion all animosities, biquerings, piques, sarcasms, witticisms, griping, or whatever tends or may tend to sow the seeds of discord, or disturb the harmony of this Assembly, and as the only means of preserving the mutual welfare of the whole, now come to the following Resolutions, binding themselves severally at the same time not only to observe the regulations at the peril of several weighty and severe penalties, but to see these penalties inflicted on the offending members according to the strictest sense of the following Resolutions:—

Resolved I.—That whatever Member presumes either designedly or wilfully to say any crooked word so that it should gripe brother Member, and should the griping member retort in such a manner by words or gestures that it should appear to this Assembly that he himself is very much griped, he is to be purged by gravel administered to him by the Carpenter.

Resolved II.—That no word shall be adjudged a crooked one till determined so by the general voice of this United Assembly, and if then a griping or griped Member shall not acquiesce in the general determination—Coventry dead.

Resolved III.—That as it appears conducive both to the order and health of this Assembly that no one be abed after eight o'clock (except he is much indisposed), at that hour all hammocks are to be struck and the cabbin clearned by nine, after that hour no washing, shaving, or shifting to be allowed. The Officer of the Day is to see the cabbin clean and decent both before and after breakfast, which he is to administer a quarter after nine at furthest, with the politeness of Sir Clement Cotterel. The said Officer is likewise to administer either tea or coffee at half-past five o'clock in the afternoon: he is likewise after each repast to see the several utensils washed and laid in the cleanest manner. Any Member offending against the regulation—Coventry dead.

Resolved IV.—That no one is to be allowed to make a riot or disturb the repose of any Member before eight o'clock, on pain of being stuffed with gravel

Resolved V.—That no one is to presume to make punch as long as the Master is willing to make it, and that an account of all wines and sea stock in general to be kept by Old Tapester.

Resolved VI.—That this Assembly are not to exceed four bottles of wine at dinner and two at supper without the permission of Old Tapester.

Resolved VII.—That no Member be permitted to hang out, put out, or produce anything indecent in the cabbin, on penalty of a severe reprimand from the President for the first offence, for the second offence to be drenched with salt water, and the third—Coventry dead.

Resolved VIII.—That if it appears to this Assembly that any one Member is in coskecutting stile he shall be first drenched with a bottle of salt water, and if it should appear then that he is griped, the Carpenter is to administer him a dose of gravel; if that won't cure him—Coventry dead.

Resolved IX.—That no Member finding himself ill disposed, or unfit for company, be permitted to hang up his cott and retire (without) having made an apology to the company.

Resolved X.—That no game or rubber be begun after nine o'clock at night without the general consent of the United Assembly.

Resolved XI.—That any Member be permitted to relate a merry story, and that the other Members may laugh at him and his story without the

least impeachment either of his character or veracity; and should it appear that he is any ways griped after the expiration of five minutes, he is to be asked if he chooses gravel or anything to scour his maw; but should he return to his former good humour, the Assembly will receive him with open arms.

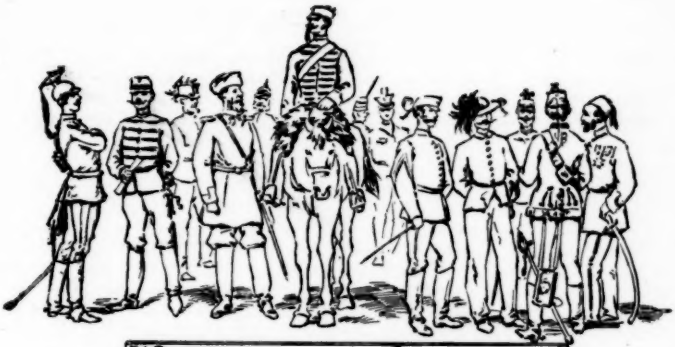
Resolved XII.—That Old Tapester be appointed keeper of the records.

By Order of the General Assembly,
G. WILLIAMS, President.
D. DURNFORD, Secretary.

Present: Major Williams, President; Captain Day, Commissary; Lieutenant Durnford, Engineer; Clieland, Cox, Remmington, Lieutenants of Artillery; George Williams, Volunteer; John Bell, Master.

A few words concerning those mentioned will add to the interest of the rules of the General Assembly. Major Griffith Williams (131)* distinguished himself during Burgoyne's campaign, especially at the action of Still Water, 7th October, 1777, upon which day he kept his guns in action until the Artillery horses were all destroyed, and his men either killed or wounded, and he himself taken prisoner. Lieutenant Molesworth Clieland (460) was killed in the action at Skenesborough, 6th July 1777. Lieutenant Remmington (Samuel Rimington) (477) died a general officer in 1826. Lieutenant William Cox (485) left the R.A. in 1778, and joined the 21st Regiment. Lieutenant Desmaretz Durnford, R.E., served for two years in North America, and subsequently at the Cape and in India. George Williams, volunteer, was a nephew of Major Griffith Williams; he carried the flag of truce from General Burgoyne to General Gates on 13th October, 1777, previous to the capitulation of the British force. After his return home he entered Parliament, was member for Ashton-under-Lyne, and J.P. for Lancashire; died 1805. Sir Clement Cotterell, son of Sir Charles Cotterell, Master of the Ceremonies, succeeded his father in that appointment, and was vice-president of the Society of Antiquaries, and well skilled in matters of proceeding and ceremony. He took the added name of Dormer. The Cotterell-Dormers are still in existence.

*The numbers against the names of the Artillery officers are those by which they are known in Kane's List of R.A. officers, which dates from 1689 up to the present time.



Reviews and Exchanges.

Customs of Service.

THE title of Colonel James W. Powell's book, "Customs of the Service," is not new to the service, as General Kautz's book on the same subject was a valuable work for many years, and filled its mission very creditably, as a guide to young officers, and Colonel Powell's work of 285 pages (Hudson Kimberley Publishing Co., Kansas City, Mo.,) seems to have the same object in view, because while he claims no originality of views and that his work is a compilation, backed by a varied and long experience, he certainly has succeeded in bringing together in a most convenient form, logically arranged, no less than seventy-eight subjects, which as he, Colonel Powell, hopes, cannot help but prove of assistance to his comrades, "who at time of hurried preparation have neither the leisure nor the books for reference." It is a very unpretentious book, but is full of meat, full of principles and how things should be done. Officers might be able to hunt up this information for themselves; but they would not do it, as they would have closely to study about sixteen standard works of undoubted authority, and then those officers for whom this book is intended would lack the experience and judgment of the old officer. Indeed, the subjects treated in this book of Colonel Powell are so varied that I shall not attempt to mention them all. The company and its duties, including officers, non-commissioned officers and privates of the different arms and corps, including cooking, etc., guard duty in its various phases, personnel, etc., non-commissioned staff, clothing, troops in campaign, sanitation and camping, advance and rear guards, symbols and corps badges, courts-martial and forms incident thereto. It takes in the best of the manuals, explained by his experience, of guard duty, of courts-martial, of cooking, of pay department, etc., etc., of subsistence. In a word, it takes in everything a soldier might wish or ought to know from Reveille in camp, garrison or bivouac, until Taps, with which the book ends. It will be found handy and useful for young officers.

JAMES REGAN, Lieutenant-Colonel 9th Infantry.

The World's Fighting Ships.

"All the World's Fighting Ships," for 1902, edited by Fred T. Jane and published by Munn & Co., New York, should occupy a prominent place in every well-equipped library, because this volume gives a good description of all up-to-date fighting ships in the navies of the world. There is constant demand for a standard and authoritative work on modern navies—a work keeping up with the rapid progress of ship and gun construction, and armor development—and I think this book will receive a warm welcome.

The grouping of the ships of each nation in classes, or, in other words, in the order of merit of offensive and defensive powers, enables the reader to make comparison of the fighting efficiency of ships without searching for and tabulating considerable data. The illustrations are very accurate and bring out the distinctive features and details of each class of ships, and also the distinguishing features of ships of the same class. A book setting forth these details has been much desired, and the editor should be complimented upon the clear way in which he has brought them out.

I think genuine wisdom was displayed in excluding from this volume all ships that are used solely for police work, for training, for surveying, and for similar duties; and thereby eliminating all vessels other than those maintained absolutely for fighting purposes. The value of this book has been much enhanced by excluding those ships that have no fighting value, for thus we have cleared away the numerous old hulks that bear awe-inspiring names but cannot go to sea, and which are of no consequence as a fleet or battle unit, or even as a unit in harbor defence.

The public and the service has been in crying need of a book containing accurate and complete descriptions of the fighting ships of all navies, a book that can be used as a handy reference. Such a book is found in "All the World's Fighting Ships"—a book giving in a concise form reliable data of all fighting ships, of the latest developments in armor, gun mounts and gun construction, as well as the most recent maneuvers of the naval powers of Europe.

Every officer of the Navy and every officer of the artillery and signal corps of the Army should possess this book and familiarize himself with its contents.

E. W. EBERLE, Lieutenant, U. S. Navy.

The New International Encyclopædia.*

The third and fourth volumes of this work contain some very interesting military articles. Under the caption "Bombardment" historical cases are cited which might be worked into an argument against the necessity for disappearing gun-carriages in sea-coast forts. The bombardment of Santiago de Cuba by Admiral Sampson, however, is said to have been a success. The author of the article says: "The bombardment of the town (Santiago) by the vessels of the fleet was very successful, and was the leading immediate cause of the surrender." General Shafter, looking at it from the Army standpoint, says: "The navy fired a few shots from the sea near Agnadores. Effect was not perceptible." (Alger's Spanish-American War, page 196.)

*THE NEW INTERNATIONAL ENCYCLOPÆDIA, Dodd, Mead & Co., New York, 1902.

Accuracy is indispensable in all books of reference. One is somewhat disappointed, therefore, to find that Colonel Benjamin L. E. Bonneville is described in the article under his name as "An American Army Engineer." Colonel Bonneville was never in the Engineer Corps.

The short article on Bridges and Docks Military is not an exhaustive essay, and yet it will convey to the lay mind a very correct idea of the military bridge. One regrets, however, that the Military Railway Bridge has been entirely omitted. The railway bridge over Potomac Creek, 80 feet high and 400 feet long, and built by the soldiers of small pine trees and saplings cut in the neighborhood, was not only a curiosity but a success. It is a pity that it should be overlooked in any article dealing with military bridges.

One can hardly expect a recognizable picture in the description of a battle which is condensed into a single paragraph, and that is all that has been allowed to the First Battle of Bull Run. Still it has been possible in that limited space to so change the accepted picture of that important battle as to make one wish to revisit the field. Was the last ridge gained by McDowell's troops the key to the position? The short description gives one the idea that it was.

As to the Second Bull Run Battle, the author is justified, perhaps, in asserting positively that Longstreet's corps joined Jackson at 10 A.M., August 29. Many soldiers who were there, however, and had good opportunities for observation, would be unwilling to admit it.

The article on Cavalry is interesting and covers the whole ground as well as one could expect within the space limits. It is pleasant to find that Alexander the Great had correct ideas as to the proper use of cavalry on the battlefield. But it is not surprising. Alexander was a military genius, and could diagnose at once the real value of anything in the military line which might come under his observation.

That the Romans, in the earlier centuries of their power, were blind to the merits of mounted troops is somewhat surprising. They depended on their infantry, and what mounted troops they had lost much of their cavalry character in consequence. In course of time, however, the importance of cavalry became better understood and its organization, armament and tactics were so improved that it was able to deliver decisive blows on the battlefield.

In mediæval times knights and nobles monopolized the mounted service. Clothed in steel and armed with the lance, they sought distinction in the tournament rather than on the battlefield, and cavalry as an arm of battle suffered in consequence.

But the arm was too important to be long overlooked. Charles VII of France rehabilitated it, and gave it an organization in which one can see the germs of modern ideas on the subject. Many of the names, too, so familiar to modern ears, had their origin in those days. One learns that the word "Carabineer" comes from Arabia, "Hussar" from Hungary, and "Dragoon" from England.

Cavalry, one learns, began to assume modern shapes about the year 1600. Maurice of Nassau, Gustavus Adolphus, and Charles XII, each in his own time, helped along its development, and Frederick the Great provided it with the tactics and training essential to its success on the battlefield. Napoleon tried to copy Frederick's cavalry tactics without much success. Frenchmen, as a rule, are not good horsemen, and, therefore, cannot be good cavalrymen; although history records some brilliant deeds that they have done.

The Cossacks of Russia are splendid horsemen, and make excellent irregular cavalry, as was demonstrated during Napoleon's invasion of Russia in 1812.

One is pleased to learn that the Civil War in the United States reëstablished the importance of mounted troops. But it took two years of active service to make troopers out of Northern recruits. During their apprenticeship they were hardly a match for the troopers of the South. After it was over they were more than a match. The general superiority of the service of security and information by Confederate troops should not be credited altogether to the superiority of their cavalry. It is easy to gather information when you are among friends.

The Raid is undoubtedly an American invention, and General Stuart's raids were always brilliant and successful in a way. But what did he accomplish? In his raid on the Peninsula, he created some excitement and destroyed some property, but he did not discover McClellan's intended change of base, nor seriously interrupt his communications. Then his absence on a somewhat similar raid when Lee's army entered Pennsylvania handicapped that commander in a way which could not have been compensated by the destruction effected by a dozen such raids.

In the Franco-Prussian War the author says cavalry operations were conducted according to the rules then recognized, and were frequently successful. The service of security and information especially was well conducted. But battlefield operations, even when successful, were so costly that the necessity for new tactics became apparent. Recent experience, especially in South Africa, has accentuated the necessity.

The cavalry organizations of the armies of the world with which the article closes is a valuable compendium of information for students of military science and tactics. Altogether the article on cavalry is excellent.

Under the caption "Coast Artillery" one finds a highly condensed but accurate description of the great guns in use by England, France, Italy and the United States. A comparison of the weights, calibre and energies of these guns, which this article makes an easy operation, is an interesting and intructive study.

The article on Coast Defense opens with a statement of the resasons for its existence. They are numerous and important and almost convince one that coast defense is a misnomer. The principles of strategy and tactics as applied to coast defense are dealt with in this article under four heads. The batteries defending a sea coast position being considered as the artillery line of battle, rigid and unchangeable, and the channels and waterways equally unchangeable determining the assailant's line of approach, the defense becomes practically a question of guns and torpedoes or submarine mines and efficient service. The principles of dispersed batteries and concentrated fire have, of course, been considered and decided upon before the batteries were constructed. Fire control and direction are questions for the artillery commander, and are so dependent upon circumstances that rigid rules on the subject are difficult to devise. As a matter of fact, the existence of adequate defense will make attack unlikely. War ships are not built and equipped for that kind of work.

JAMES CHESTER, Major of Artillery (Retired.)

An Epitome of Tactics.

The "Epitome of Tactics and Lessons from the Boer War," in 136 pages, now in its third edition, prepared by Major Pollock, who was an active participant in that war, and published in London by William Cowes & Son, 23 Cockspur street, S. W., admirably fills its purpose as an aid to Company Field Training. Its basic principle is the thorough instruction of the minor units. With this accomplished, we are sure to have fine battalions, regiments—in a word, a thoroughly prepared army. Major Pollock does not approve of too much garrison work. He thinks, as all tacticians think, that these duties should be varied by marches, the camp and bivouac, and that the men should be taught to run, to leap, to climb, and to reconnoiter a piece of ground, explore a copse, to examine houses, etc., to take cover, entrench, etc., etc. He has a good deal to say about attack and defense and fire tactics, very live subjects in these days of improved armament, and they bear somewhat upon the errors in Boerland; and this part will be an excellent aid in connection with a study of our extended order, and in this lies its great importance for the American officer. With this book and his tactics many doubtful points will be explained to the young officer. This is very important. He tells us the very latest about attack and defense, of woods, bridges, advance and rear guards, outposts, reconnaissance, discipline, drills and how to teach them. It is an excellent little book and although concise, full enough for a full idea of the principles stated. It will prove a valuable addition to every military library, and ought to be in the hands of every officer.

JAMES REGAN, Lieutenant-Colonel, 9th Infantry.

The Little Soldier.

"Le Petit Soldat: A Manual of the Principal Institutions and Practical Guide in an Enemy's Country" (Karlsruhe, J. Bielefeld, 1902). Such is the title of a little book by R. Kron, Doctor of Letters, who is probably more a man of letters and exponent of the French tongue than a military authority.

His little work, or "orpuscle" as he expresses it, was prepared for the students of the German military schools. Selecting the French army as the "prototype of the modern armies" (not altogether a compliment to the German establishment) the author briefly describes the methods of recruiting, organization, selection of officers, mobilization, instruction, etc. A description of the various French decorations is of interest. The second section, intended as a speaking guide or "porte parole," contains several pages of questions which might be asked by one lost in a French-speaking land. As all the descriptions are directed towards France and the French army, it would seem as if that country is considered, as a matter of course, as the logical enemy's country to the German officer. The production is neither a soldier's handbook, as its title implies, nor sufficiently comprehensive to be of any value to the military student.

N. S. J.

The Iron Brigade.*

"The Iron Brigade," by General Charles King. An historical novel and one of the best of its kind ever written.

Opening with a description of the conditions immediately preceding and at the outbreak of the Civil War as they were found in Wisconsin, he follows the Iron Brigade from the birth of the Army of the Potomac around Washington that first winter, through to the surrender. His description of the part taken by that famous brigade in the battles of Gainesville, Antietam and Gettysburg are particularly good; such descriptions can come only from the pen of a soldier.

A very pretty romance is interwoven in a way to take the reader many times within the Confederate lines. The pen pictures of Abraham Lincoln, General McClellan and others, as well as the true Southern gentleman, are very goood. Our deplorable lack of appreciation of the proper use of cavalry, as well as the conditions prevailing at the War Department in the early stages of the war, are clearly set forth.

The author takes too much advantage of his "novelist's license" in bringing his characters together so often, which does not detract, however, from a soldier's description of a soldier's life in campaign which is the great charm of the book.

It is entirely unlike anything the author has heretofore written, but will stand as one of, if not his best work.

F. H. L.

*THE IRON BRIGADE, by Gen. Charles King. G. W. Dillingham, New York, 1902.

Annual Prize Award, 1902.

Upon the recommendation of the Board, of which Major-General Otis was chairman, prizes for essays on "The Organization and Functions of a Bureau of Military Intelligence" have been awarded as follows:

First—Gold Medal, $100 and Life Membership to Lieut. EDWIN R. STUART, Corps of Engineers.

Second—Silver Medal, $50 and Honorable Mention to Captain T. BENTLEY MOTT, Artillery Corps.

Third—Honorable Mention to Major ROBERT K. EVANS, Asst. Adjutant-General.

T. F. RODENBOUGH, *Secretary.*

Governor's Island, Feb. 14, 1903.

Our Exchanges.

Military.

Armée et Marine.—December 14, 1902. The new building of the Army Museum. At the German Manœuvres of 1902. Schoolship of the Italian Navy at Toulon. The History of Our Squadrons of Evolution. December 21.—The Military Mansion of the Nation. The Question of the Mediterranean from a German Point of View. The Navy Budget. December 28.—Events at Venezuela. The French -Siamese Treaty. The Burning of the Brooklyn Bridge, New York. The Colonial Army. January 11.—The Jump of the Horse. Impressions of a French Officer in Spain. Our Generals. The Hospital Corps in the German Army. January 18.—Affairs at Venezuela. The English Government and the Transatlantic Trust. The Military Medal and Admiral Gervais. January 25.—The Treaty with Siam. The Commission for Promotions. Our Generals. Military Instruction at the Central School. February 1.—Football in the French Army. The English in Siam. The Coal Depot of the American Navy Department.

Internationale Revue.—December, 1902. The French Army Appropriation for 1902. Reform in French Military Courts. Improvements of the Fortifications Near Paris. Organization of the Italian Artillery. The Corps of Cadets in Japan. Official History of the War with China. Description of the Austrian Seacoast and the Fortifications Thereat.

Journal of the United States Artillery.—January–February. A Step Forward. Coast Artillery Organizations. Formulæ for Determining the Deviating Effect of Wind. Organization of Personnel for the Care of Electrical Apparatus at Posts. French Rapid-Fire Field Artillery. Electricity in Permanent Seacoast Defenses.

Journal of the Royal U. S. Institution (London).—December, 1902. The New Russian First Class Armored Cruiser "Bayard." Amalgamation of Bearer Company and Field Hospital as a Military Unit. The Doctrine of Continuous Voyage: Its Origin and Development from the Seven Years' War to the Boer War. What Can We Learn from the Boer War? The Location and Method of Transporting the Wounded in War. The United States Naval Manœuvres, 1902. General Wolfe's Advice to a Newly Joined Ensign in 1756. January.—An Elizabethan Army. People of the Pacific. The Origin, Evolution, and Future of the Personnel of the British Royal Navy. The Lance as the Weapon of Cavalry. What Has the Boer War to Teach Us as Regards Infantry Attack? Conscription or Compulsory Volunteering. The Torpedo-Virator. The Company Cart.

Journa of the Association of Military Surgeons.—December, 1902. Volvulus of the Small Intestine. The Management of Smallpox. The Prophylaxis of Certain Diseases Incident to Camps in Time of War. The Public Health and Marine Hospital Service of the United States. January.—The Medical Department of the United States Army Transport Service. Some Practical Suggestions on Tropical Hygiene.

La Belgique Militaire.—December 14, 1902. Tactical Tasks. Sabre Signals. The Military Strength of Japan. The Material of the Horse Batteries. The Committee of the Patriotic Society. December 24.—Pecuniary Situation of the Officers. Promotion of Officers, and Non-Com. Officers. Regiment of Trained

Soldiers. January 4.—Manœuvres Regulation for the French Infantry. Instructions for the Shoeing of Cavalry Horses. The Bicycle Companies. January 11.—For the Civilian Employees of the War Department. Admirable Effect of the New Military Law. General Society of Retired Officers. January 18.—The Material of Horse Batteries. Period for Target Practice and Manœuvres Strength of the Fort Artillery in Germany. English Opinion Regarding the German Infantry. Marriage of Officers. Recruiting in 1901.

Revue du Cercle Militaire.—December 20, 1902. The Financial Preparedness in Time of War. Reorganization of the Veterinary Corps. Measures to Prevent the Spreading of Epidemic Diseases in the Army. December 27.—Organization of the Field Artillery. Organization of the Infantry and Colonial Artillery. Engineer Officers of the Reserve or Territorial Army. Candidates for Promotion. January 3, 1903.—Tactical Concourse. Preparation in the Staff College. Italian Military Life. Distribution of English Troops in South Africa. January 16.—The Belgium Army: The New Organization. Italian Military Life. January 17.—The Officer of the Armed Nation. New Organization of the Cavalry Divisions and Brigades. School of the Hospital Corps. January 24.—The New Regulation Regarding Infantry Manœuvres. The Officers of the Armed Nation (Continued). Cavalry in Battle. Three Years of War.

Revue d'Artillerie.—November, 1902. Consideration of a Firing Ground for Rapid-Firing Guns. Studies and Instructions of Artillery Firing Parties. December, 1902.—Selection of a Firing Ground for Rapid-Firing Guns. Bicycle Curiosities.

Revue Militaire des Armées Etrangères.—December. The Que stionof Field Howitzers in Germany. Organization of Military Justice in the U. S. Army. Modification of the Cadre of the Italian Infantry. Studies of the South African War. January.—The Army Movements in 1870–71 and their Lessons. The Swiss Shooting Societies. War College at Berlin. Studies on the South African War.

United Service Gazette (London).—December 13, 1902. Outpost Duty on the Veldt. Do We Require Field Artillery? The Higher Policy of Defense. Examination of Officers in Foreign Languages. Commerce in War Time. December 20.—General Palmer's Farewell to the Army in India. Queen and the War. Admiral Holland's Steam Steering Instructor. Russian Squadron's Visit. The New Volunteer Regulations. December 27.—Distribution of the Army in South Africa. Earl Roberts at Sandhurst. Naval Officers, Ancient and Modern. Assistant Clerks in the Royal Navy. Royal Military College. January 3.—Military Training in Schools. Lord Roberts at Woolwich. The Distribution of the British Army. Military Education. January 10.—The Naval Expenditures of the Great Powers. The Payment of Army Pensions. Royal Military Academy. Royal Military College. The Delhi Manœuvres. January 17.—The Army Rifle Association. Advisory Boards for the Auxiliary Forces. Royal Army Medical Corps. The Indian Medical Service.

United Service (New York).—January. A General Staff Corps. From Generation to Generation. Shadows. Military Integrity. The Foreign Invasion of Canada. February.—The Organized Militia. Reminiscences of the Old Navy. From Generation to Generation (Continued). De Wet's Last Success. La Garita del Diablo. A Strange Wound. Captain John A. Webster.

United Service Magazine (London).—November, 1902. Imperial Defense and Colonial Responsibilities. The French Submarines. Naval and Military Combined Manœuvres of the U. S. Gibraltar and the Bay of Algeciras. Our Only Chance. Offensive Tactics in Modern War. Strategy and Tactics in Mountain Ranges. French and German Musketry Regulations. Horse Breeding for the Empire in N. W. Canada.

Naval.

Bolotin del Centro Naval.—October and November, 1902.

Proceedings of the U. S. Naval Institute.—December, 1902. The Manœvres between the Navy and the Coast Artillery. The Army and the Navy Manœuvres as Viewed from Afloat. Naval Administration. Training of Gun Captains. The Training of Landsmen. The Question of Naval Engineers. Another Graphic Solution in Coast Navigation. The Tactics of the Gun.

Miscellaneous.

Anales de la Sociedad Cientifica Argentina.—November and December.
Bulletin of the American Geographical Society: regular issues, to date.
Current Literature: regular issues, to date.
Journal of the Western Society of Engineers.—November and December.
La Engeneira: regular issues, to date.
La Revue Technique: regular issues, to date.
Political Science Quarterly: regular issues, to date.
Proceedings of the American Society of Civil Engineers: issues, to date.
Pennsylvania Magazine of History and Biography: regular issues, to date.
Review of Reviews: regular issues, to date.
The Scientific American: regular issues, to date.
The Dial: regular issues, to date.
The Popular Science Monthly: regular issues, to date.
The Seventh Regiment Gazette: regular issues, to date.
The Medical Record: regular issues, to date.
The Century Magazine: regular issues, to date.
The Army and Navy Journal: regular issues, to date.
The Army and Navy Register: regular issues, to date.

Received for the Library and Review.

Our Relations With Cuba. An address delivered by General James H. Wilson at the Auditorium Hotel, Chicago, October 25, 1902

Patrolling in South Africa, with Hints on Training Scouts at Home. By Capt. C. F. Vander Byl. Second edition. Aldershot, Gales & Polden, Ltd., 1902.

Practical Hints for Mounted Infantrymen. By Capt. B. L. Anley Second edition. Aldershot, Gale & Polden, Ltd., 1902.

Annual Report of the Adjt.-General of New Hampshire, 1902.

Annual Reports of the Gettysburg National Park Commission to the Secretary of War, 1893–1901. Washington, Gov. Printing Office, 1902.

Register of the Commandery of the State of Pennsylvania. Military Order of the Loyal Legion of the U. S.

The New International Encyclopædia Vols. V and VI, New York, Dodd, Mead & Co., 1902.

Regimental Duties Made Easy. By Maj. S. T. Banning. Aldershot, Gale & Polden, Ltd., 1903.

Catechism on Field Training. By Maj. S. T. Banning. Aldershot, Gale & Polden, Ltd., 1903.

Three Years' War. By Christian Rudolf De Wet. New York, Charles Scribner's Sons, 1903.

The Military Service Institution.

HONORARY MEMBERS.

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Bvt. Brig.-Gen. T. F. RODENBOUGH, U. S. A

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(Vacancy.)

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Term ending 1909.

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LIVERMORE, W. R., Lieut. Col. C. E.
REGAN, J., Lieut. Col. 9th Infantry.
REILLY, J. W., Col. Ordnance Dept.
RIVERS, W. C., Capt. 1st Cavalry.
SIMPSON, J., Col. Q.M. Dept.

Term ending 1907.

APPLETON, D., Bvt. Brig.-Gen., N.G., N.Y.
BARRY, T. H., Colonel, A. G. Dept.
Vacancy.
HUNTER, E., Colonel, J.A.G. Dept.
LIPPINCOTT, H., Colonel, Med. Dept.
MOORE, J. M., Colonel, U.S.A.
WOODRUFF, C. A., Colonel, Artillery Corps.

Term ending 1905.

Finance Committee.

Gen. BARRIGER.
Col. MOORE.
Col. REILLY.

ALLEN, L. C., Major, 16th Infantry.
BRAINARD, D. L., Major, Subsistence Dept.
DOUGHERTY, W. E., Col., 8th Infantry.
DRAVO, E. E., Lt.-Col., Sub. Dept.
MILLS, A. L., Col., Supt. U.S.M.A.
BURTON, G. H., Col., I.G. Dept.
WEBB, A. S., Bvt. Major-Gen. (late) U.S.A.

Library Committee.

Col. MOORE.

Publication Committee.

Gen. BARRIGER, Gen. RODENBOUGH, Col. REILLY and Col. REGAN

MEMBERSHIP AND DUES.

Membership dates from the first day of the calendar year in which the "application" is made unless such application is made after October 1st, when the membership dates from the first day of the next calendar year.

Initiation fee and dues for first year $2.50; the same amount annually for five years subsequently. After that two dollars per year. This includes the Journal. Life membership $50.

NOTE.—Checks and Money Orders should be drawn to order of, and addressed to, "The Treasurer Military Service Institution," Governor's Island, New York City. Yearly dues include Journal.

Please advise promptly of changes of address.

Gold Medal—1903.

First Prize—Gold Medal, $100 and Life Membership.

Second Prize—Silver Medal, Honorable Mention and $50.

I.—The following Resolution of Council is published for the information of all concerned:

Resolved, That a Prize of a Gold Medal, together with $100 and a Certificate of Life Membership, be offered annually by THE MILITARY SERVICE INSTITUTION OF THE UNITED STATES for the best essay on a military topic of current interest, the subject to be selected by the Executive Council, and a Silver Medal and $50 to the first honorably mentioned essay. The Prizes will be awarded under the following conditions:

1. Competition to be open to all persons eligible to membership.

2. Each competitor shall send three copies of his essay in a sealed envelope to reach the Secretary *on or before January 1, 1904*. The essay must be strictly anonymous, but the author shall adopt some *nom de plume* and sign the same to the essay, followed by a figure corresponding with the number of pages of MS.; a sealed envelope bearing the *nom de plume* on the outside and enclosing full name and address, should accompany the essay. This envelope to be opened in the presence of the Council after the decision of the Board of Award has been received.

3. The prize shall be awarded upon the recommendation of a Board consisting of three suitable persons chosen by the Executive Council, who will be requested to designate *the essay deemed worthy of the prize;* and also in their order of merit those deserving of honorable mention.

In determining the essay worthy of the prize, the Board will be requested to consider its professional excellence, usefulness and valuable originality, as of the first importance, and its literary merit as of the second importance. Should members of the Board determine that no essay is worthy of the prize, they may designate one or more essays simply as of honorable mention; in either case, they will be requested to designate one essay as first honorable mention. Should the Board deem proper, it may recommend neither prize nor honorable mention. Should it be so desired, the recommendation of individual members will be considered as confidential by the Council.

4. The successful essay shall be published in the Journal of the Institution, and the essays deemed worthy of honorable mention shall be read before the Institution, or published, at the discretion of the Council, which reserves the right to publish any other essay submitted for a prize, omitting marks of competition.

5. Essays must not exceed fifteen thousand words, or thirty-five pages of the size and style of the JOURNAL (exclusive of tables), nor contain less than 10,000 words.

II.—The Subject selected for the Prize Essay of 1903, is

"ESPRIT DE CORPS: HOW IT MAY BE STRENGTHENED AND PRESERVED IN OUR ARMY, UNDER THE PRESENT ORGANIZATION AND METHOD OF PROMOTION."

III.—The Board of Award chosen for the year 1903 is as follows:

MAJOR-GENERAL ADNA R. CHAFFEE, U. S. Army.
BRIG.-GEN. GEORGE L. GILLESPIE, Chief of Engineers.
COLONEL ALBERT L. MILLS, Supt. U. S. M. Academy.

GOVERNOR'S ISLAND, N. Y.
Jan. 1, 1903.

T. F. RODENBOUGH,
Secretary.

The Seaman Prize.

MAJOR LOUIS L. SEAMAN, M.D., LL.B. (late Surgeon, 1st U. S. Volunteer Engineers), has founded a prize in the MILITARY SERVICE INSTITUTION OF THE UNITED STATES by contributing annually

One hundred dollars in Gold

for the best Essay, subject to be named by himself, and to be approved by the Executive Council.

The subject proposed and adopted (December 10) for 1903 is:

"HOW BEST TO PROMOTE RIFLE PRACTICE AMONG OUR COUNTRYMEN IN TIME OF PEACE AS A PREPARATION FOR WAR."

The competition is open to all Officers or ex-Officers in good standing, of the Regular or Volunteer Service of the U. S. Army.

Three copies of the Papers on the subject must be submitted to the Secretary of the Institution, to reach his office not later than Nov. 1, 1903. Each Essay must be limited to 15,000 words, exclusive of statistics.

All other conditions will apply as those connected with the Annual, Military Service Institution, Gold Medal Prize.

The gentlemen chosen by the Council to constitute the Board of Award for the year 1903, are:—

BRIG.-GEN. CHARLES DICK (late U. S. V.).
BRIG.-GEN. GEORGE W. WINGATE (late N. G., S. N. Y.).
MAJOR STANHOPE E. BLUNT, Ordnance Dept., U. S. A.

GOVERNOR'S ISLAND, N. Y.
Jan. 1, 1903.

T. F. RODENBOUGH,
Secretary.

Prizes for Short Papers.

Extract from the Minutes of a Stated Meeting of the Executive Council of the Military Service Institution of the United States, Major General Brooke, V. P., in the Chair, held at Governor's Island, N. Y. H., March 14, 1902.

* * *

Resolved: That the regulations governing the award of Annual Prizes be and they are amended as follows:

Hancock (Infantry) Prize.

The Hancock Prize: $50, and Certificate of Award; and $25, and Certificate of Award: to be given for the best and second best original essays or papers, the awards to be made under existing regulations for the Gold Medal, excepting that the papers shall contain not less than 2,500 words nor more than 12,000 words, and that but one copy of each paper shall be required from the author; said essays to be critical, descriptive, or suggestive, on subjects directly affecting the Infantry or Foot Service, which have been published in the JOURNAL of the Institution during the twelve months ending February 28 of each year and which have not been contributed in whole or in part to any other association, nor have appeared in print prior to their publication by the Institution, nor have been published in the JOURNAL in any previous year, and excluding essays for which another prize has been awarded. The certificate of award to be signed by the President and Secretary of the Institution and the award to be made upon the recommendation of a committee of three members of the Institution, not members of the Executive Council, two of whom shall be Infantry officers to be appointed, annually, by the President; the award to be made and announced not later than May 1 of each year.

Fry (General) Prize.

The Fry Prize: to be the same as the Hancock Prize and awarded upon the recommendation of a board of three members, not members of the Executive Council, under the same regulations for papers or essays appearing in the JOURNAL during the twelve months ending August 31 of each year, on subjects directly affecting the military service and not otherwise provided for; with the announcement not later than November 1.

Buford (Cavalry) Prize.

The Buford Prize: to be similar to the Hancock Prize, and to be awarded on the recommendation of a board of which two members shall be Cavalry officers, for papers published in the JOURNAL during the twelve months ending April 30 of each year, on subjects directly affecting the Cavalry or Mounted Service; with announcement not later than July 1.

Hunt (Artillery) Prize.

The Hunt Prize: to be similar to the Hancock Prize, and to be awarded on the recommendation of a board of which two members shall be Artillery officers, for papers published in the JOURNAL during the twelve months ending June 30 of each year, on subjects directly affecting the Artillery Service; with announcement not later than September 1.

Publisher's Department.

THE GIBRALTAR OF THE INSURANCE WORLD.

THE Company which has "The Strength of Gibraltar" has given one more proof, if proof were needed, that the assumption of the phrase was well warranted in the Annual Statement now before us.

During 1902, The Prudential has added over one hundred and eight million dollars to the amount paid of for insurance it had in force; it has added to its assets nearly twelve million dollars; to its income nearly five million dollars; and to its surplus funds more than two million five hundred thousand dollars.

It has now in force over eight hundred million dollars of life insurance, divided among nearly five million policies, representing, roughly speaking, about one million families.

This is really a magnificent showing for a Company that has only a record of twenty-seven years to look back upon; certainly nothing like it has ever before occurred in the history of American Life Insurance. In these days of keen competition, success can only be the result of enterprise coupled with upright business management; and one does not need to go further than this cause to account for The Prudential's great success.

* * *

AN ARTISTIC MENU.

One of the features of the modern dining car service is the menu card, which, in addition to giving a list of the dishes served, wine list, etc., now frequently contains illustrations calculated to attract the eye and engage the attention of the traveler. The New York Central, with the beginning of the new year, has introduced a very artistic series of menus which have for the illustration quaint and beautiful female heads and figures which will certainly add to the attractiveness of the meals *en route*. These menus are real works of art, and were executed by Bailey, Banks & Biddle, Philadelphia. A copy will be given to each lady patron of the dining cars.

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SOME HISTORICAL FACTS

Which Show the Phenomenal Growth of the Anheuser-Busch Brewing Association.

The story of the success of the Anheuser-Busch Brewing Association practically begins with 1865, the year Mr. Adolphus Busch bought an interest in the concern, which was then being conducted in a small and moderately paying way.